JANUARY 1970

USGA GREEN SECTION RECORD

A Publication on Turf Management
by the United States Golf Association

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VOL. 8, NO. 1 **JANUARY, 1970**

COVER PHOTO —
Miss Joy Baker mowing with a triplex putting green mower.

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CLASSIFIED ADS

HELP!

Where Do We Get Golf Course Labor?

by LEE RECORD, Agronomist, USGA Green Section

When a man in his late 40's or early 50's loses his job because of disability or health, the future can seem awfully grim. When a man retires at age 65 after earning a meager salary and has no income other than Social Security, he may be placed on the tense borders of poverty. The man we are speaking of is often the best source of present-day golf course laborers, and even he is hard to find.

We faced a labor shortage on golf courses in 1969, not only in the Mid-continent region, but throughout the United States. To the golf course superintendent, the available-labor situation today is very discouraging because course maintenance has become a skilled and specialized job. Not every individual can adapt himself to the mechanics that revolve around the daily routine of a golf course laborer. Where can you find men who are dependable and willing to work five to seven days a week? Where can you find men who will work from daylight until late afternoon for relatively low wages with few fringe benefits?

The success of any golf course maintenance program depends to a large extent on the quality of the golf course laborer. During the spring and fall it is common to find three or four men (including the superintendent) trying to maintain an 18-hole golf course. When college and high school students arrive for employment in late May and early June, the maintenance staff is filled. When the students return to school in early September, the superintendent is once again faced with a labor problem. Conditioning of the course during the spring and fall is not up to standards, and it is frequently during this time of the year that important work could be done in preparation for the following summer.

In the greater Chicago area, Spanish-American and Mexican laborers arrive from the Rio Grande Valley of Texas and from Mexico to work from

Good facilities are as important to a top-notch worker as to anyone else with ability and pride.

mid-March to December 1st. This is an excellent source of labor for our golf courses. Mexican laborers are seasonal employees who frequently come back year after year. Lodging and in some instances food is provided for them. One superintendent in Chicago reports that four of his returning Mexican employees will be covered by medical benefits not only while they are in Chicago, but also while they are in Texas for the winter.

We are interested and concerned, along with the golf course superintendents, in the labor shortage problem. What is its cause? What can be done to improve the situation, and what

Fig. 1 *1969 LABOR QUESTIONNAIRE USGA MID-CONTINENT REGION*

Do you have a:	Yes/No Number	Low/High Salary or hourly wage	(Partial or Full payment by employer) Hospitalization	Retirement Requirements	Xmas Bonus Amount	Living Quarters for Laborers
Foreman or Assistant Superintendent	19 Yes 15 No 1 co-supt. 1 foreman each	$6,000/$11,200 average $9,044 $3/$3.75 average $3.38	6 Full 19 None 11 33%-50%	35 None 1-10 yrs. at age 65	12 Yes 21 None 3 Members contribution $50-$500 average $194	35 None 1 Yes plus meals
Mechanic	23 Yes 10 No 2 part-time 1 foreman-mechanic	$8,400/$9,000 average $8,700 $2.40/$4.50 average $3.45	9 Full 15 None 11 up to 70% 1 begin in Jan.	34 None 1-20 yr @ 65 1-20 yr @ 65	19 Yes 14 None 3 Members contribution $25-$500 average $168	34 None 2 Yes
Permanent laborers	35 Yes 1 No 1-7 men Average 3 men	$1.75-$3/$2.10-$3.75 Average $2.46 Average $2.89	9 Full 10 None 16 33%-50% 1 begin in Jan.	34 None 1-20 yr @ 65 1-20 yr @ 65	25 Yes 7 None 4 Members contribution $200-$650 average $163	31 None 5 Yes 1 with meals 2 1 man only 2 Mexican labor
Seasonal laborers	36 Yes 2-13 men Average 7 men	$1.40/$2.50 $1.90/$3.50 Average $1.93 Average $2.74	1 Full 29 None 5 up to 50% 1 begin in Jan.	36 None	22 None 14 Yes $20-$150 average $162	25 None 1 Pending 10 Yes (Mexican labor)

Fig. 2 *FRINGE BENEFITS IN OTHER INDUSTRIES**

	Food Service	U. S. Industry
Holidays per year	None: 54% One: 11% One to six: 35%	Seven days
Sick leave	None: 69% Seven days per year: 31%	Median: 10 days a year (78% have a plan)
Long term disability	Covered: 26%	Covered: 80%
Life insurance	Covered: 33% ($2,000 is median amount)	Covered: 99% ($3,000 is median amount)
Accidental death and disability insurance	Covered: 21%	Covered: 74%
Hospital insurance	Covered: 27%	Covered: 99%
Major medical	Covered: 6%	Covered: 75%
Retirement	Covered: 14%	Covered: almost 100%

* **Club Management**, September, 1969

additional labor sources may be available?

Last October a labor questionnaire was mailed to 50 private golf courses in the greater Chicago area. The courses selected were those with similar labor problems, needs, and desires for improving existing conditions. The response to the questionnaire was excellent with a return of 70 percent. The results (Fig. 1) we think you will find interesting.

When one compares these figures with those from United States food service and industrial employment sources (Fig. 2), we may find one reason why good, permanent golf course workers are hard to find.

Improved wage scales with added fringe benefits of hospitalization, major medical, retirement, sick leave and vacations strengthens bargaining positions in dealing with and encouraging permanent employment.

Wage improvement and increases in fringe benefits alone, however, are not the sole criteria for the top-notch prospective laborer. The facilities and the equipment he will use also are major factors. Inside lavatory facilities, showers, lockers, etc., are as important to him as they are to anyone else.

Bernie Belknap, Superintendent of Rolling Hills Country Club, Wichita, Kans., faced a labor situation last summer similar to most golf course superintendents in the mid-continent region. His approach to its solution, although not entirely new, is somewhat different, and I asked him for his story:

Female Labor

by BERNIE BELKNAP, Golf Course Superintendent, Rolling Hills Country Club, Wichita, Kansas

Female labor is a good source of labor on a golf course!

About three years ago, when our school help went back to classes, we tried for two months to fill out our crew with men. Advertisements were put in the local newspaper and employment agencies were contacted. We found it impossible to hire male help.

Years ago I had worked on a golf course that employed women for its grounds force. I started thinking about this as a possible source of labor and made two lists of jobs one that women could do, and one with jobs too difficult for them to do. I found more jobs on the course that they **could** do than jobs they **could not.**

I went to the Green Committee and explained my dilemma. It was decided to advertise for female help for the golf course, and we had a number of applications for the job. In talking to the applicants, I was surprised at the number who expressed a preference for outside work. I selected four women whom I felt were quali-

fied. I started them in section work. Each was responsible for five greens, plus approximately 22 bunkers. Their daily duties included the hand-watering of dry, hard spots on greens and aprons, repair of ball marks, raking and weeding of bunkers. As time allowed, they were also responsible for trimming grass around all trees in their section. One young lady mowed all the greens with a triplex putting green mower.

Once trained they did a marvelous job. The club members gave us more compliments on the bunkers and the condition of the course than we ever had before.

It is my firm belief that female laborers do a neater job and are more painstaking in the maintenance of greens and bunkers. One of the women does an excellent job in maintaining the club house grounds. Her responsibility is to care for flowers, shrubbery, and grass in that area.

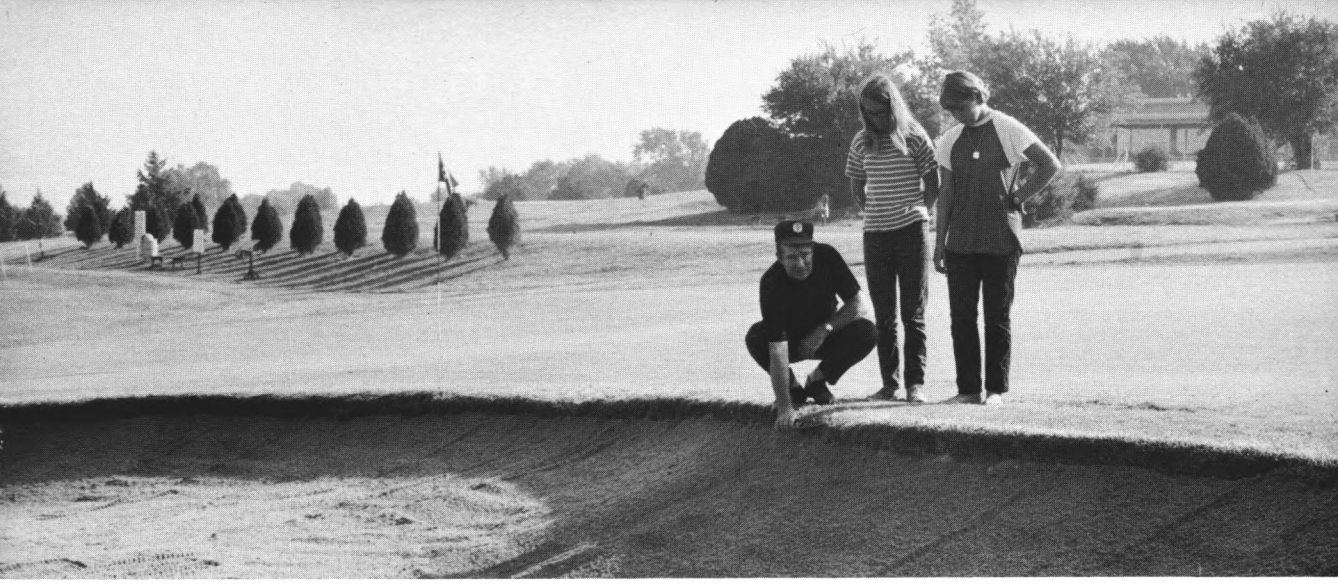
I have used women to drive tractors, spray weeds, water-in fertilizer, mow around trees with small mowers, help in top-dressing greens, change tee markers and cups, and fill ball washers.

We have found no complications in using a mixed crew. Each person has his or her assigned job to do. If something happens that a woman cannot handle there is always a man nearby to help out. There is always a man to aid if an unexpected problem arises that a woman cannot handle. Mowers do break down and water systems do develop leaks.

We pay the women and male summer help the same wages. It is our opinion that a woman who does the work a man does should be paid the same wages, and the women workers have done an outstanding job for us at Rolling Hills.

Author Lee Record then asked Miss Joy Baker, one of Belknap's five women workers, to comment on her employment on the maintenance crew at Rolling Hills Country Club. Miss Baker's story and observations as a female golf course laborer follow.

Miss Joy Baker on a truckster and Miss Laura Kester raking a sand bunker.



Superintendent Bernie Belknap instructing Miss Baker and Miss Kester on trimming sand bunkers.

A Female Greenkeeper

by MISS JOY BAKER, Rolling Hills Country Club, Wichita, Kansas

A female greenkeeper?

I am 18, a high school graduate, and a lady greenkeeper. I didn't know that women are rarely employed in such an occupation. I first became interested in greenkeeping through my father, who has worked for several years at the Rolling Hills Country Club. I assumed that hiring women to take care of the course was a normal procedure.

Greenkeeping is a healthful occupation. I go to work at 7 a.m. and I usually leave at 3:30 p.m. I feel physically fit, have a glorious suntan, and I am relatively free of employer pressure. On the other hand I don't worry about getting dirty or wet, or having calloused hands and dirty fingernails, and my hair is worn in a pony tail.

I think we have a compatible and congenial crew. Some people have asked if men resent us women working with them. Frankly, we feel that since both men and women have been successfully employed in other jobs, there is nothing unusual about this arrangement. Our group varies from a 72-year old Scotsman to several 16-year olds of both sexes. There is often more than one member of a family included in our crew. Some of the employees are students who work only in the summer.

My greatest responsibility is caring for the greens. I mow all the greens and take care of my section of five greens and 18 bunkers. I mow with a triplex putting green mower. The tools I carry in my work are a knife, screwdriver, gopher poison, ball mark fixer, and a quick coupler.

Caring for the greens is difficult during the summer. Brown patch, dollar spot, cutworms and wilt keep us on our toes. If wilted areas are not watered they will turn into a hard and unmanageable area. You must be careful in watering because you can apply too much water and scald the greens.

We help in spraying for weeds and pulling out foreign grasses—crabgrass, bermudagrass, etc. unwanted on greens. Ball marks must be repaired, bunkers must be well-manicured and raked daily. We take pride in our areas and worry about the appearance of our section.

I doubt that many women would select greenkeeping as a life-long career, but for temporary employment it is quite satisfying. The women at Rolling Hills are employed seasonally. Depending on the weather, they are hired in early spring, and their employment is terminated in the late fall since the summer is the busiest season.

We are asked to work overtime only if we need to water the greens when the temperature soars, or if there are extra duties outside our assigned work that we must do. Therefore, the hours are good for mothers with school-age children.

I like my job, and I look on this type of work as a coming source of employment for women.

Making The Most Out of Air

The impact wrench can be used as a screw driver as well as on nuts and bolts.

by STANLEY METSKER, Superintendent, Boulder Country Club, Boulder, Colorado

If you think compressed air is only good for filling tires, it's time for another look. Pneumatic tools can make your shop more efficient by speeding up work. All you need to get started is a good air compressor that will supply 90 pounds per square inch of clean, dry air at the operator's touch.

An air gun is a handy gadget to have around your shop. It is just a small hand-held device for directing a blast of air. It will clean out dirty corners, blow out tiny ports and pipes, or dry off wet parts. Our only problem has been the constant breaking off of the nozzle, and I fixed that with a piece of ¼-inch plastic protective tubing.

Another inexpensive but handy tool for the air gun is a spark plug cleaner. One manufacturer has one for less than $20. There is also a more expensive model that checks the spark under pressure. Both use a blast of grit to clean those hard-to-get places around the electrodes of the plug. If you have any two-cycle engines, you will really appreciate this tool for cleaning fouled plugs.

Still in the inexpensive category is a paint spray gun. This will require a pressure regulator because spray guns usually need only about 40 pounds of pressure. There are models available that will spray either enamel (internal mix) or lacquer (external mix).

Most cities have specific codes regarding indoor painting, but most equipment can be painted outdoors. The real job in painting is always in the preparation.

Here's where an air sander can save a lot of time in taking off old paint, sanding down rough places, or smoothing off putty.

The advantages of using air for sanding are that the air-powered sander is much faster, more powerful, and the speed can be varied. Light duty sanders are available for about $25.

Once you have an impact wrench in your

shop you will never give it up. No other tool can increase your shop efficiency more. We have all seen how tire shops whip lug nuts on and off our car wheel. This same tool can work for you on mowers, tractors, engines, as well as changing tires. Because you can adjust the power by a simple control on the wrench, you have positive control over how much pressure each nut or bolt receives. And do not overlook the use of this tool as a screw driver. Because you can hold the wrench steady and use your strength for pushing instead of turning, you have a real advantage on those hard-to-tighten or loosen screws.

For impossible-to-loosen nuts or bolts, the tool you must have is a pneumatic chisel. It is also good for cutting off old welds, punching or driving off stuck parts, etc. We have even used it for taking the ends out of metal barrels, and it works as good as any can opener.

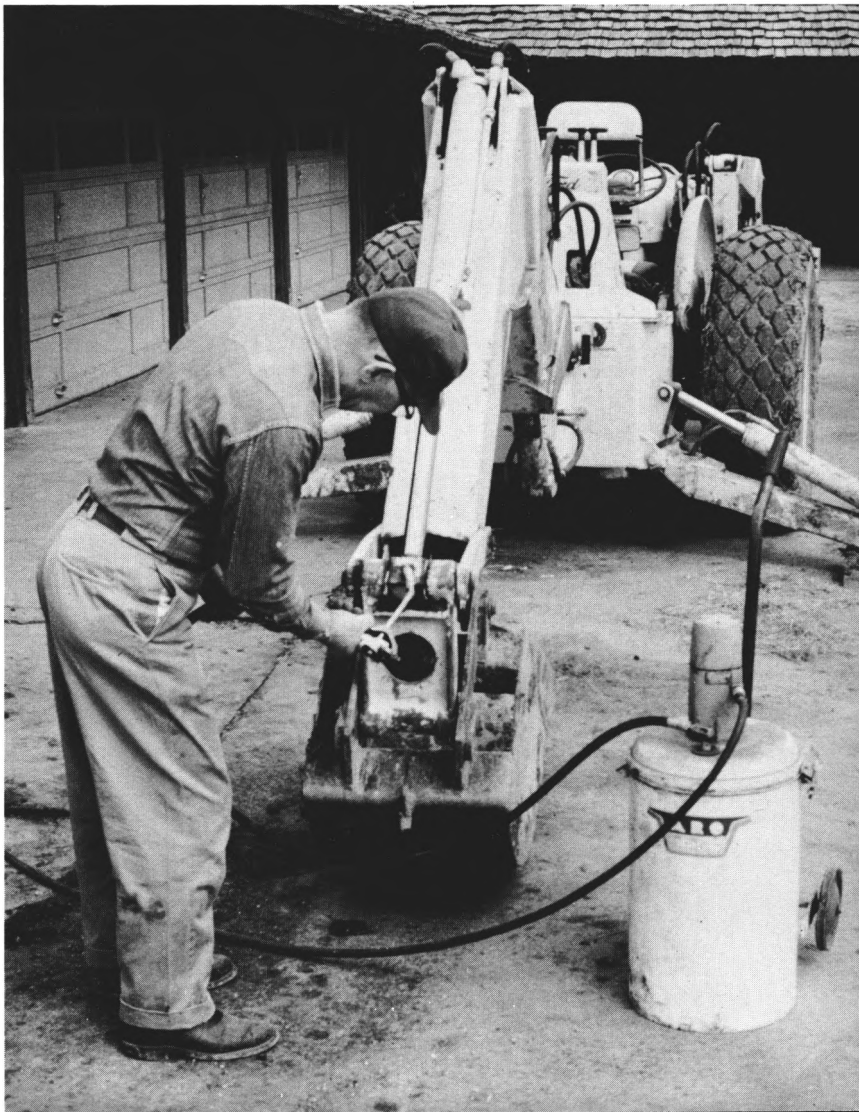
Other air tools you will find useful in your shop include a truck jack or bumper jack, a tire changing tool, or an air-operated hoist similar to those found in automobile service stations. This last item is the most expensive, but Howard Gaskill, of Hiwan Golf Club, Evergreen, Colo., has one he uses for servicing golf carts.

"It sure beats crawling underneath, and by raising the cart just a couple of feet it saves a lot of bending over," Howard reports.

Air tools do require some maintenance, and here are a few tips worth remembering:

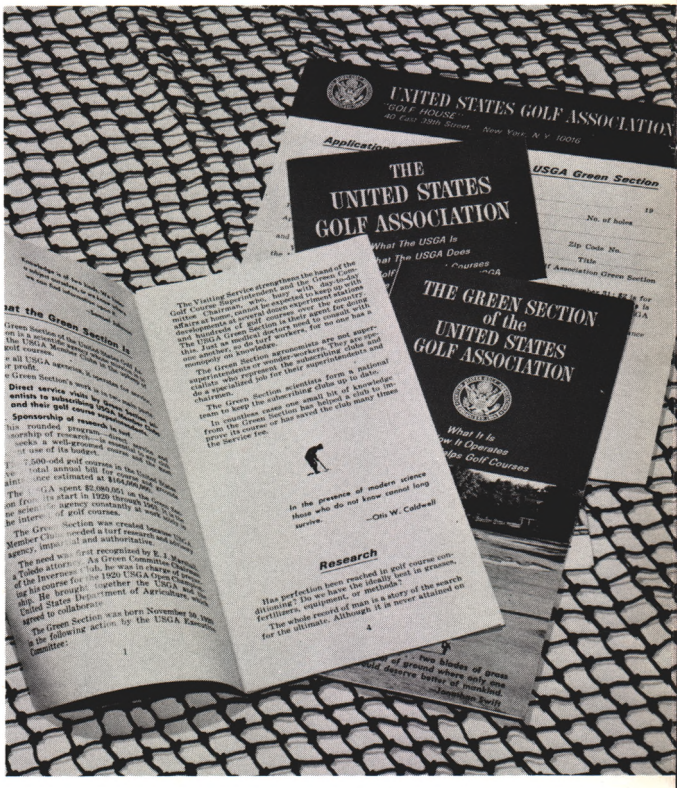
1. Install all pipe and fittings ½ - inch or larger so as not to restrict air passage.
2. Install all lines to drain. Water always forms in the tank and lines. Drain it often.
3. Use a filter at each outlet to assure clean air.
4. Use an in-line lubricator with tools that have internally moving parts.
5. Put quick-coupling connections on all tools and hoses to make quick changes easily.

If you buy good quality tools and take good care of them, your shop efficiency will increase and you will find it easy to make the most out of air.



A good air compressor has many uses in the maintenance of golf course equipment.

An Open Letter To USGA Green Section Subscribers



Because of rising costs and to help reduce the current operating deficit, the United States Golf Association has been obliged to increase subscription fees to the Green Section Visiting Service.

Subscribing clubs have been notified of the increased rate through a letter from Henry H. Russell, of Miami, Chairman of the Green Section Committee. The text of the letter is as follows:

Would you believe that since 1951 the USGA Green Section has made over 16,000 service visits to Member Clubs throughout the United States! No other agency in the world of golf has such a record.

During these 19 years, I think you will agree playing conditions on our courses — in spite of tremendously increased play — have improved ten fold. And it is the golf course superintendent, through his technology, who is directly responsible for this advancement. We in the USGA would also believe that our 16,000 visits and support of turfgrass research have significantly contributed to good golfing turf as well.

The Green Section, as all USGA Agencies, operates for service, not for profit. Indeed, it was created so that USGA Member Clubs would consistently have a turf research and advisory agency that was impartial, authoritative and economically operated. The fact that it has nothing to sell except SERVICE is only one feature of a unique Green Section Staff. Employed are nine agronomists trained specifically in golf turf maintenance and management. The 16,000 golf course visits places them in a position to help any club to develop greater efficiency and better turf for more enjoyable golf for its membership.

In these days of rising costs and inflation, the cost of operating the Green Section Service has increased far more rapidly than income. (Anyone familiar with travel costs will recognize the problem.) During the past five years, for example, the USGA has subsidized this activity by $268,091

over and above subscription fees. In order to make the Green Section a financially sound operation, the Executive Committee — with great reluctance — feels the Visiting Service fee must be increased in 1970. The schedule is as follows:

Less than 18 holes	$250.00
18 to 27 holes	300.00
More than 27 holes:	
A) 36 holes	325.00
B) Per regulation course in addition to 36 holes	75.00

For most clubs this amounts to less than 1/3 of 1 per cent of the annual maintenance budget. In today's high-priced service market that figure is still unbelievably small. In countless cases one small bit of information from a Green Section visit has improved the course or saved the club many times the Service fee. In a club of 300 members, it amounts to $1 a year per member. Is not $1 a year per member worth improved maintenance and management practices? Where else can clubs turn if not to the Green Section for unbiased information on all questions relating to golf course maintenance and management? We believe you will want to keep the experienced Green Section staff working for better turf for more enjoyable golf for your membership.

Green Section brochures giving all details and benefits your club receives from the Visiting Service Program have been mailed to superintendents, green chairmen and presidents of subscribing clubs. If there are other questions, we would welcome the opportunity to reply to them.

Thank you for your support.

Most sincerely,

Henry H. Russell, Chairman
USGA Green Section Committee
USGA Executive Committee

SUPER SAM by Paprocki

Bring Back The Grass

by JIM MURRAY

"I don't know about you, but I'm kind of an old-fashioned guy who likes the real McCoy. I want butter that comes from cows. I like cotton in my shirts, wool in my socks, leather in my shoes.

I'm sick of the polyester, permanent press, plastic world. I don't want additives in my bread, chemicals in my beer. I think aspirin is the best cold remedy and castor oil will cure almost anything else that's wrong with you. I squeeze real oranges for breakfast or I go without. I won't buy a suitcase if its got plastic hangers in it.

But I'm willing to forgive the chemists, pharmacologists and syntheticians anything if they'll just keep their cotton-pickin' — pardon me, nylon-pickin' — hands off sports.

Football should be played on grass, baseball should be played outdoors, and golf should be played against nature, not hydraulics. I wish DuPont would stick to explosives, and Monsanto to fertilizers, and leave the gamesmanship to us.

Take last weekend: Three fine football teams from the Los Angeles area — USC, UCLA, and the Rams — ventured outside the all-wool-and-a-yard-wide world of the Coliseum and entered the plastics division of sports. You would have thought they were playing the game on solid ice. You half-expected them to halt the game at any time and say, "Wait a minute, I'll go home and get my skates."

The only game that should be played on an artificial surface is pool. (I exclude hockey, because, while it is artificially made, the surface is, after all, real ice and not a Libby-Owens-Ford derivative.)

I am not fully persuaded a football field should even be MOWED. (I remember one year the Trojans of USC played a game in Colorado in which they complained the grass was too tall for them, but I have to think any offense that can't move the ball against high grass should turn in its scholarships.)

A Thornless Rose

You see, good old American know-how can't leave any sport, fabric, climate, river, lake, or any other natural condition alone. It would tinker with Paradise. It feels it can fade nature. It can give you a rose without thorns, cattle without horns. I expect any day now they will let the contract for construction of a new synthetic earth and use this old one for a warehouse.

Take baseball. They begin to construct parks to eliminate the cheap home runs (forgetting the cheap home runs saved baseball after the Black Sox scandal) and, the next thing you knew they were playing it indoors, on felt, and with air conditioning. You take the sweat out of baseball, the blood out of football and the walk out of golf, and pretty soon you have a nice permanent-press, wash-and-wear, no-calories form of athletics. You can buy a world's championship in a super market.

I mean, where does it end? Do you have bats with adjustable settings for curveballs, fastballs, off-speed pitches — or are they self-corrective for whichever shows up at the plate? Do you magnetize gloves so that fly balls will drop in them wherever they are stuck up in the air?

Football on a carpet, indoors, at regulatory 72 degrees is an obscenity. Football is supposed to be played in nose-biting cold, watched from inside a raccoon coat, and on Mother Earth. It should not be played on any surface you can vacuum-clean or hang on a clothesline and beat. If it's raining or snowing, it should trickle down your neck, get in your cleats. Give us back our mud, gopher holes, puddles, grass. Go carpet Rhode Island or dome Delaware, if you must, but let's play football the way Walter Camp did. We don't want powdered football, artificially-sweetened baseball, or miracle fabric golf any more, thank you."

"The Grass Is Always Greener - - - "

A few of the 165 bunkers at Muirfield. Sod layers are used to build the face of the bunker and must be replaced about every five years.

by WILLIAM H. BENGEYFIELD, Western Director, USGA Green Section

Last summer it seemed nearly as many turfgrass specialists returned from Europe as bankers, politicians, relatives, or rich aunts. Amid the roar of jets at Amsterdam's Schipol airport, a returning fellow passenger — upon learning of our journey — remarked, "So you've actually been trying to find where the grass is really greener." "Yes," I answered, then concluded it was in the United States!

This is not to say that Europeans are incapable of growing good grass, nor that greener grass is always best. There is little truth in either statement. But the aged fact remains: traveling, seeing, listening and learning from the other fellow is **always** educational and exciting. It is **always** worthwhile. A few words here on last summer's first International Turfgrass Conference (Harrogate, England) and a view of the United States turf managers international strengths and weakness, in my view, may interest some of our readers.

FROM POUNDS TO KILOS

The speaker was from Switzerland and asked, "How many kilos of **Poa pratensis** per hectare are sown along roadsides in the U.S.?" (What?) Or Dr. I. Yashikowa from Japan reporting that, "200 cubic centimeters of bensulide per 100 square meters in 10 liters of water will give good **Poa annua** control." Or Bjarne Langvad of Sweden stating that, "sand (.02-4 millimeters) should be added in a layer 15 to 20 centimeters thick."

Yes, the metric system is worldwide and definitely IN. Even the British (inventors of the inch, foot, yard, mile, ounce, pound and ton) have conformed. In fact, the USA and Canada are the last major hold-outs for avoirdupois weights and ancient ways of measuring distances. Familiarizing ourselves with and accepting the metric system is really our move — not the rest of the world's. It is such a logical system, particularly in our field of turf management, that we should be ready at last to adjust and accept.

FROM BLUEGRASS TO POA

Then it is also our folly to insist on using

The attendants of the First International Turfgrass Conference held in Harrowgate, England, July, 1969.

common names for all plants rather than scientific names. Wouldn't it be just as easy; wouldn't it be far more professional for us to use **Poa pratensis** when we talk about Kentucky bluegrass and **Agrostis palustres** when referring to Seaside creeping bentgrass? We seem to have no trouble in pronouncing **Poa annua** or **Poa trivialis!** What's wrong with pronouncing **Agrostis tenuis?** The rest of the turfgrass world, from the Dutch scientist to the salesman in a London garden shop uses scientific plant names; why can't we? Would it not be a step toward greater professionalism if, for example, the Golf Course Superintendents Association should advocate such a move? At least it would be a step forward in communication, between ourselves as well as with the rest of the world. It's worth thinking about.

TO THE SCOTTISH LINKS

Few golfers return from Scotland disappointed in the test of golf they have experienced. Scottish courses "play" extremely well. Greens are fast but true. The courses are strategic (Muirfield has 165 sand bunkers) and delightful. Their roughs are unforgettable, but beautiful. And their golfers must be more complacent than ours by the way they accept the more rugged conditions. Richard S. Tufts, past President of the USGA, recently commented, "Golf under the more natural conditions under which it is played on the British link courses, is a far better sport. The overmanicuring of our courses to meet the demands made by our golfers has injured the game. Things have to be too perfect with us, and the only practical excuse for the maintenance of our roughs in almost fairway condition is the problem of delay in play created by lost balls."

TO THE PLANT BREEDERS

Among the Dutch, Swedish, British, and now Germans, the emphasis in Europe has been on turfgrass breeding. New and outstanding varieties are under development. Ryegrass, fescue and even timothy (discontinued in United States turfgrass use years ago) receives major attention. To a lesser degree, bluegrass (Poa species) and the colonial type bents (Agrostis tenuis) are also investigated. Indeed, some new varieties of Agrostis tenuis appear outstanding under conditions in The Netherlands, and this research might well someday re-establish colonial bents for putting green use in the USA.

Lest anyone conclude that I was brainwashed and now advocate "Growing Grass — European Style," rest assured that this is not the case. While emphasis in Europe has been on turfgrass breeding, management practices have not, perhaps need not, keep pace. The British attitude toward turf management and turf use is different from ours. Where in the United States would you be successful with a seed mixture of 70 per cent red fescue and 30 per cent colonial bentgrass for greens? Where could you succeed with three putting green applications a year of a fertilizer containing ammonium sulfate, iron sulfate, bloodmeal, hoof and horn and superphosphate? Their tees and fairways are never fertilized.

A HUMBLING WORLD

One would simply not survive in the United States with the management practices commonly followed abroad. Our golfers demand quality turf and uniform playing conditions. Our climatic differences dictate a total turf management effort; disease control, weed control, optimum fertility levels, uniform irrigation, soils to resist compaction, etc. The climatic factor and the turf use factor alone takes all the argument out of "Who grows the best turfgrass in the world?" The question is irrelevant.

Suffice to say the turfgrass plant, through good management, can be grown successfully around the world and under a tremendous variety of climatic conditions. It's a marvelous plant! It usually demands good management, and to grow it well, our constant attention. It is the center of a very humbling profession.

STATEMENT OF OWNERSHIP

STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION (Act of October 23, 1962; Section 4369, Title 39, United States Code). 1. Date of Filing—October 1, 1969. 2. Title of Publication—USGA GREEN SECTION RECORD. 3. Frequency of issues—Six issues a year in January, March, May, July, September and November. 4. Location of known office of publication—40 E. 38th Street, New York, N. Y. 10016. 5. Location of the headquarters or general business offices of the publishers—40 E. 38th Street, New York, N. Y. 10016. 6. Names and addresses of Publisher, Editor, and Managing Editor: Publisher—United States Golf Association, 40 E. 38th Street, New York, N. Y. 10016. Editor—William H. Bengeyfield, 40 E. 38th Street, New York, N. Y. 10016. Managing Editor—Robert Sommers, 40 E. 38th Street, New York, N. Y. 10016. 7. Owner (if owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual must be given.) Names and addresses—United States Golf Association, 40 E. 38th Street, New York, N. Y. 10016; President—Hord W. Hardin, 40 E. 38th Street, New York, N. Y. 10016; Vice-Presidents—Philip H. Strubing and Robert K. Howse, 40 E. 38th Street, New York, N. Y. 10016; Secretary—Fred Brand, Jr., 40 E. 38th Street, New York, N. Y. 10016. Treasurer—Lynford Lardner, Jr., 40 E. 38th Street, New York, N. Y. 10016. 8. Known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages or other securities—None. 9. Paragraphs 7 and 8 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner. Names and addresses of individuals who are stockholders of a corporation which itself is a stockholder or holder of bonds, mortgages or other securities of the publishing corporation have been included in paragraphs 7 and 8 when the interests of such individuals are equivalent to 1 percent or more of the total amount of the stock or securities of the publishing corporation. 10. This item must be completed for all publications except those which do not carry advertising other than the publisher's own and which are named in sections 132.231, 132.232, and 132.233 Postal Manual (Sections 4355a, 4355b, and 4356 of Title 39, United States Code).

	Average No. Copies Each Issue During Preceding 12 Months	Single Issue Nearest to Filing Date
A. Total No. Copies Printed (Net Press Run)	6,584	6,500
B. Paid Circulation		
1. Sales Through Dealers and Carriers, Street Vendors and Counter Sales	none	none
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C. Total Paid Circulation	5,597	4,917
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F. Office Use, Left-Over, Unaccounted, Spoiled After Printing	707	1,303
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I certify that the statements made by me above are correct and complete.
Robert Sommers, Managing Editor

USGA GREEN SECTION RECORD
JANUARY, 1970

TURF TWISTERS

MICROSCOPES FOR NEMATODES

QUESTION: Can I determine when my greens need treating with a nematicide by counting the number of nematodes in a given area—say a quart of soil? (Tennessee)

ANSWER: You could if you used a microscope and you could differentiate between parasitic and non-parasitic nematodes in the total population. Nematology, however, is a rather complex study and only trained individuals should evaluate your nematode problem by examining samples under the microscope.

PRECAUTION FOR CHEMICALS

QUESTION: The controversy over DDT raises in my mind questions as to possible health hazards from golf course chemicals such as thiram, malathion, chlordane and sodium arsenite. What say you? (Minnesota)

ANSWER: Any material (even aspirin), in quantity, is most certainly dangerous. However, it is unlikely that golfers would contact them in sufficient quantity to do harm. Even employees who actually handle the materials run a negligible risk with proper safety precautions. A possible exception to this might be thiram, to which certain individuals are super-sensitive. Such individuals are rather rare, and may come in contact with this chemical when handling numerous household goods because thiram is widely used as a rubber preservative.

With the exercise of normal precaution, these chemicals are not only reasonably safe, but essential to the upkeep of the course.

TRIPLEX PUTTING GREEN MOWERS

QUESTION: What does the Green Section think of the new triplex putting green mowers? (New Jersey)

ANSWER: We will have a nation-wide report in the May, 1970, issue of the **Green Section Record.**

SYNTHETIC SAND FOR BUNKERS

QUESTION: We have heard a lot about using "synthetic sand" in bunkers. I've even seen some blue, red and maroon-colored bunkers on TV. What can you tell us about it and is it legal? (Arizona)

ANSWER: There's nothing in the rule book that says bunker sand must be white. We just happen to think most people prefer it that way. But where colored synthetic sand has been used, superintendents report fewer weeds and even bermuda is slow to grow into it. Professional golfers report it "plays well." However, it costs from two to three times as much as top quality bunker sand and that's hard to sell.