



# USGA JOURNAL

AND  
TURF MANAGEMENT

FOR DISTINGUISHED SERVICE



The USGA has honored Miss Patty Berg with the Bob Jones Award for sportsmanship and O. J. Noer with the USGA Green Section Award for work with turfgrass. (For further information, see page 6.)

— Photo by Joe Gambatese

**FEBRUARY, 1963**





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TURF MANAGEMENT

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Editor: Joseph C. Dey, Jr. Managing Editor: Eddie L. Ervin, Jr. All articles voluntarily contributed.

## USGA COMPETITIONS FOR 1963

Championship or Team Match	Entries Close	Qualifying Rounds	Dates of Event	Location
(1) Walker Cup				
Open	May 8	Local: May 27 **Sectional: June 11	May 24-25 June 20-21-22	Turnberry, Scotland The Country Club, Brookline, Mass.
Amateur Public Links	*May 29	¶June 16-23	July 8-13	Haggin Oaks Municipal Golf Course, Sacramento, Calif.
Women's Open	July 3	—	July 18-19-20	Kenwood Country Club, Cincinnati, Ohio
Junior Amateur	June 26	July 16	July 31-Aug. 3	Florence Country Club, Florence, S. C.
Girls' Junior	July 26	—	August 12-16	Wolfert's Roost Country Club Albany, New York
Women's Amateur	July 31	—	August 19-24	Taconic Golf Club, Williams College, Williamstown, Mass.
(2) Americas Cup	—	—	Sept. 5-6	Wakonda Club, Des Moines, Iowa
Amateur	August 7	August 27	Sept. 9-14	Wakonda Club Des Moines, Iowa
Senior Amateur	Sept. 4	Sept. 24	Oct. 7-12	Sea Island Golf Club, Sea Island, Ga.
Senior Women's Amateur	Oct. 16	—	Oct. 30-Nov. 1	The Country Club of Florida Village of Golf Delray Beach, Fla.

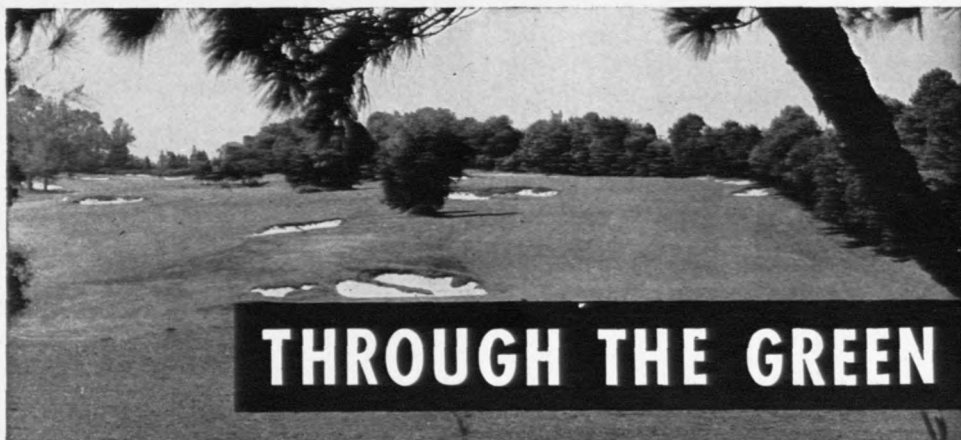
\*\* OPEN CHAMPIONSHIP: Date of Sectional Qualifying Championships may be changed to Monday, June 10 if local authority in charge deems advisable.

\* AMATEUR PUBLIC LINKS CHAMPIONSHIP: Entries close with each Sectional Qualifying Chairman.

¶ Exact date in each Section to be fixed by Sectional Chairman.

(1) WALKER CUP MATCH: Men's Amateur teams—Great Britain vs. United States.

(2) AMERICAS CUP MATCH: Men's Amateur teams—Canada vs. Mexico vs. United States.



## THROUGH THE GREEN

### A Royal Museum Gift

Through the generosity of golfers all over the world, the USGA Museum in "Golf House" displays a wide variety of memorabilia.

One of the most unusual items is a tie-pin that once was the property of the Prince of Wales, the present Duke of Windsor. The gold pin bears the Prince of Wales insignia and motto "Ich Dien" or "I serve". The Prince gave the pin to J. Victor East in Australia in 1918 at the Royal Melbourne Golf Club in appreciation for golf instruction. Mr. East graciously presented the pin to "Golf House".

The Museum received gifts from 65 donors in 1962.

### World's Longest Hole?

Is there any golf hole in the world more than 745 yards long? If not, the Black Mountain Golf Club, Black Mountain, N. C. can claim the record. One of the holes on its new nine measures 745 yards, according to the club's professional, Ross Taylor.

Mr. Taylor says that from the center of the tee the hole is downhill and straight-away for 300 yards; from this point it dog-legs to the right and measures an additional 445 yards to the center of the green.

Mr. Taylor asked for the USGA's

recommendation as to par for this hole. In essence, he was told that par should be determined by the course officials and course architect (possibly with the help of the Carolina Golf Association) in accordance with the definition which provides that "par is the score that an expert golfer would be expected to make for a given hole". This definition may be found on page 66 of the USGA Rules of Golf booklet.

In this section of the Rules booklet a table entitled "Yardages for Guidance" in determining par provides that holes 471 yards long and over should normally be classified as par-5s. However a hole such as the one in question may be given a par of 6 if an expert golfer would be expected to score 6. The "Yardages for Guidance" table does not contemplate the existence of holes entitled to a par of 6.

### Equipment for Youth Abroad

Through a project of the People-To-People Sports Committee sports equipment is being made available to young people in certain non-privileged parts of the world.

Kits containing equipment used for playing baseball, basketball, soccer, softball, volleyball and for boxing will be shipped to places designated by the purchaser.

Additional information may be had

from the People-to-People Sports Committee, 20 Exchange Place, New York 5.

### **Precision Putter—Conforms Only If Mirror Not Usable**

The Association has ruled that the "Precision Putter", manufactured by Precision Golf Clubs, Inc., Escondido, Calif., does not conform with the Rules of Golf if a functioning mirror device is built into it.

The original "Precision Putter" contains mirrors in the head; mirrors are encased in a block of solid glass-like material which also serves as the face of the club.

The USGA Executive Committee has considered two models. The first was submitted by Murray Ehmke, Escondido, Calif. The glass-like material encasing the mirrors in this model is transparent, permitting the player to view the flagstick through the mirror when he is in position to putt. It was deemed to be in violation of Rule 2-2a, as a club with a usable mirror device is not of "the traditional and customary form and make", also in violation of Rule 37-9, which prohibits the use of any device for the purpose of gauging or measuring distance or conditions which might affect play.

The second such putter was submitted by Paul Runyan, La Jolla, Calif. It was identical to the original except that the viewing system was made unclear so as to render the mirrors useless. This model was deemed to conform with the Rules.

### **British Open Qualifying**

The British Open at Royal Lytham and St. Anne's July 10-12 will inaugurate a different system of qualifying.

There will be a qualifying play of 36 holes for players not exempt under eight categories. Heretofore all players were required to enter the qualifying test in this Championship. The field for the Championship proper will



**IT WAS, TOO!**

A USGA staff member devised this method of halting traffic to the third floor of "Golf House" recently when the area was being renovated to provide for more exhibit space.

consist of 120 players and at the end of 36 holes the field will be cut to the low 45 scorers and those tying for 45th.

Prize money will total £8,500 (\$23,800), the same as in 1962. First prize is \$4,200.

Exceptions from qualifying are to be granted under the following circumstances: 1. First 20 and anyone tying for 20th place in the 1962 British Open; 2. First 30 and anyone tying for 30th place in the 1962 British PGA Order of Merit; 3. Last 10 British Open Champions; 4. Last 5 British Amateur Champions; 5. Members of 1962 British World Amateur Team; 6. Last 10 USGA Open Champions; 7. Last 5 USGA Amateur Champions; 8. First 30 money winners and any tying for 30th place in the PGA of America on the official list for one year ending with the PGA Tournament immediately before closing date of USGA Open Championship entries.



## The Arnold Palmer Case

The need for uniform adherence to the Rules of Golf was emphasized in the disqualification of Arnold Palmer in the Bing Crosby tournament at Pebble Beach last month. At the heart of the case was the Rule for a provisional ball.

In the third round Palmer, after playing from the teeing ground on the 17th hole, played a provisional ball. He then deemed his original ball unplayable and completed the hole with the provisional ball.

However, under "tour rules" of the Professional Golfers' Association of America, a provisional ball is not authorized for a ball which may be unplayable; when a provisional ball has been played for another purpose, it must be abandoned if the original

ball is deemed unplayable. Since Palmer holed out with the provisional ball, he was disqualified.

The PGA "tour rule" is based upon a trial rule with which the USGA experimented in 1960-61.

Under the world-wide Rules of Golf, as approved by the United States Golf Association and the Royal and Ancient Golf Club of St. Andrews, Scotland, a provisional ball may be played for a ball which may be unplayable. If the original ball then be deemed unplayable, the player must continue playing with the provisional ball. (See Rule 30.)

Unusual attention was focused on the case because Palmer's remarkable streak of being in the prize money was ended after 47 consecutive tournaments.



**PALMER LIKENESS AT WILSHIRE**

*The Barranca Room in the Wilshire Country Club, Los Angeles, is decorated with nearly life-size photographs of American golfers who have won both the British and USGA Open Championships. Recently Arnold Palmer's photo was placed there. Those at the unveiling included, left to right, Scott Dunlop, Harold Warconda, Palmer, John McHose and Club Professional Jerry Barber.*

## Prayer For Golfers

Before the annual dinner of the Metropolitan Golf Writers' Association in New York, Monsignor S. J. McGovern of the Church of St. Joseph, Spring Valley, N. Y., delivered the following specially-prepared invocation:

"Bless us and these gifts which we are about to receive. May the fairway of life rise to meet you; may the wind be ever at your back; may His grip sustain you and a heavenly green await you. May you be ten thousand years in heaven before the devil knows what your score really was."

At the presentation of awards Gene Sarazen received the writers' Gold Tee award and Bobby Nichols the Ben Hogan Trophy. The latter is presented by the Golf Writers' Association of America. The George M. Trainor family of Rochester, N. Y., received the first "Golfing Family of the Year" award. It is a memorial to the late William C. Chapin who at his death was a member of the USGA Executive Committee and Chairman of the Green Section Committee.

## Regain Amateur Status

The USGA Executive Committee has reinstated:

Donald W. Anderson, Fernandina Beach, Fla.; Theodore H. Blaner, Old Saybrook, Conn.; Alma N. Clare, Ogden, Utah; Richard O. Guardiola, Shaker Heights, Ohio; Robert W. Haefner, Rochester, N. Y.; Mrs. Paul W. Hendrix, Shreveport, La.; Robert G. Housen, Lakewood, N. J.; Arthur E. Howell, Detroit, Mich.; Joseph F. Kazimir, Walkill, N. Y.; Roland P. Mailhot, New Bedford, Mass.; Edward M. Meyerson, Los Angeles, Calif.; Robert W. Mueller, Greendale, Wis.; William S. Murphy, Toledo, Ohio; Robert W. Neilson, Lima, Ohio; Mrs. Ellamae W. Roessler, Walnut Creek, Calif., and George C. Sasso, Cleveland, Ohio.

## TURF BOOK AVAILABLE

The book "Turf Management", a popular educational printing of all matters pertaining to turf, is now on sale in a revised edition.

It is a complete and authoritative book written by Professor H. Burton Musser and sponsored by the USGA. The author is Professor Emeritus of Agronomy at Pennsylvania State University.

Orders may be placed through the USGA, 40 East 38th Street, New York 16, N. Y.; the USGA Green Sectional Regional Offices; the McGraw-Hill Book Co., 330 West 42nd Street, New York 36, N. Y., or at local bookstores. The cost is \$10.95.

## LGU Defers Competition

A stroke play championship in England which would have involved amateur and professional women golfers has been deferred by the Ladies' Golf Union of Great Britain. The tournament was to be played June 14-15 at Hoylake. Lack of sponsor support prompted the postponement.

## Necrology

It is with regret that we record the death of:

**JESSE P. GUILFORD**, Newton, Mass., the USGA Amateur Champion in 1912. He also was a member of three USGA Walker Cup Teams. Mr. Guilford was known as "the Boston Siege Gun" because of his tremendous drives.

**BEN LEE BOYNTON**, Dallas, Texas, a former member of the USGA Sectional Affairs and Green Section Committees. He was an All-America football player at Williams College in 1917-19-20 and in December of 1962 was enshrined in the National Football Hall of Fame.

## McLeod's Golden Jubilee

Fred McLeod, oldest USGA Open Champion, was honored at a dinner recently that celebrated his 50th year as professional at Columbia Country Club, Chevy Chase, Md. Freddie, who is 81, won the Open in 1908.

## Championship Sites

The USGA has accepted invitations for the following Championships:

1964 Women's Amateur—August 17-22 at Prairie Dunes Country Club, Hutchinson, Kansas.

1964 Senior Amateur—October 5-10 at Waverly Country Club, Portland, Oregon.

1965 Open—June 17-19 at Bellerive Country Club, Creve Coeur, Mo. (near St. Louis).

1966 Open—June 16-18 at the Olympic Club, Lakeside Course, San Francisco.

STATEMENT REQUIRED BY THE ACT OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, JULY 2, 1946 AND JUNE 11, 1960 (74 STAT. 208) SHOWING THE OWNERSHIP, MANAGEMENT, AND CIRCULATION OF USGA JOURNAL AND TURF MANAGEMENT published seven times a year at New York City, N. Y., for October 1, 1962.

1. The names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, United States Golf Association, 40 East 38th St., New York, N. Y.; Editor, Joseph C. Dey, Jr., 40 East 38th St., New York, N. Y.; Managing editor, Eddie L. Ervin, Jr., 40 East 38th St., New York, N. Y.; Business manager, none.

2. The owner is: (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 the 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 member, must be given.) United States Golf Association, 40 East 38th St., New York, N. Y.; President, John M. Winters, Jr., 40 East 38th St., New York, N. Y.; Vice-Presidents, Clarence W. Benedict, 40 East 38th St., New York, N. Y., and

Wm. Ward Foshay, 40 East 38th St., New York, N. Y.; Secretary, Bernard H. Ridder, Jr., 40 East 38th St. New York, N. Y.; Treasurer, Hord W. Hardin, 40 East 38th St., New York, N. Y.

3. The known bondholders, mortgagees, and other security holders, owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities are: None.

4. Paragraphs 2 and 3 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.

5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: 3,400.

Eddie L. Ervin, Jr.  
Managing Editor

Sworn to and subscribed before me this 16th day of October, 1962.

Charles H. Ward  
(My commission expires  
March 30, 1963)

# **SINGLE RULES CODE AVERTS SNAGS IN WORLD TEAM GOLF**

*All but PGA  
tour players  
follow the Rules*

In more than 1,500 rounds played in the three World Amateur Team Championships of 1958-60-62, the players have not run afoul of serious problems involving the Rules of Golf, in spite of differences of language and customs in their many lands.

This striking commentary on the value of a single code of Rules was made by William Ward Foshay, of New York, Chairman of the USGA Rules of Golf Committee, during the Association's 69th Annual Meeting last month. He was reporting on some of the effects of the USGA's abandonment of its "trial rules" a year ago and its reaffirmation of the long-standing policy favoring world-wide uniformity in the playing code.

Mr. Foshay pointed out, however, that deviations from the Rules of Golf continue to be used on the tournament circuit of the Professional Golfers' Association of America, even though the PGA directs its 34 Sections to follow the Rules of Golf.

"The situation concerning the special rules of the professional circuit now seems even more dismal than before," Mr. Foshay reported. "Efforts were continued to persuade the PGA that withdrawal of their special circuit rules would be in the interests of their own members as well as those of the game as a whole . . .

"Most distressing of all was the fact that in certain pro-amateur events PGA representatives contrived to have the professional play the tour rules whilst his amateur partner observed the Rules of Golf. Think of it —partners in a game of golf playing under different rules!"



WM. WARD FOSHAY

## **Award Winners**

Miss Patty Berg, professional golfer, was honored with the Bob Jones Award for distinguished sportsmanship at the Annual Meeting, held at the Biltmore Hotel in New York.

During the USGA Green Section's annual Educational Program the preceding day, O. J. Noer, of Milwaukee, received the USGA Green Section Award for outstanding work in turf-grass development.

The Educational Program was based on the topic "Traffic on the Golf Course." It will be reported in a USGA publication in the spring.

The Association's 1962 officers and Executive Committee were re-elected at the Annual Meeting except that Morrison Waud, of Chicago, joined



the Committee in replacement of Harold A. Moore, who did not make himself available. John M. Winters, Jr., of Tulsa, continues as President.

Among other developments reported at the Annual Meeting were:

**Senior Championship:** A new format has been established for the Senior Amateur Championship. In 1963 it will be played entirely at match play. A field of 128 players (instead of 120) will become eligible after Sectional Qualifying Rounds. There will be seven rounds of match play in the six days of the Championship. On the fifth day, when the quarter-finals and semi-finals will be played, players will be permitted to use automotive transportation if they desire.

Heretofore the Championship proper has consisted of an 18-hole qualifying round with 32 qualifiers for match play.

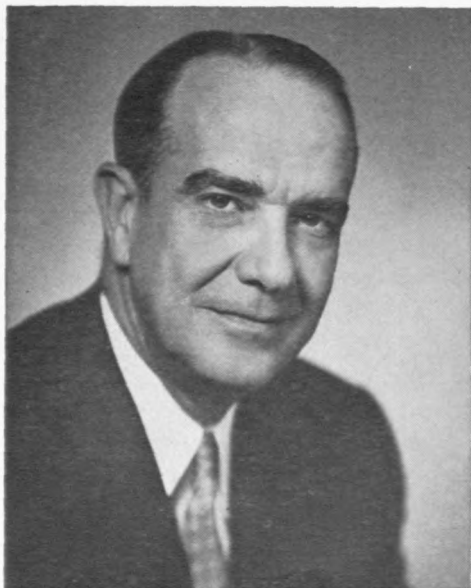
**Open Prize Money:** Prize money for professionals in the 1963 Open Championship has been increased approximately \$16,000 to a new record total of about \$86,000. Additionally,

\$7,800 will continue to be awarded in 13 Sectional Qualifying Championships, bringing the grand total for the Championship to \$93,800. Of the extra prize money, approximately \$15,000 will be reserved for the 100 qualifiers for the Championship who do not become eligible for the last 36 holes; they will receive \$150 each. The Champion's prize has been increased from \$15,000 to \$16,000.

**Women's Open:** Prize money for professionals in the Women's Open Championship has been increased by \$1,000 to a total of \$9,000.

**Championships:** The Association's nine Championships in 1962 attracted a record 9,788 entrants, an increase of  $3\frac{1}{4}$  over the previous year's high mark. There were 238 Sectional Qualifying Rounds connected with five of the Championships.

**Amateur Status and Conduct:** It is no longer a violation to accept compensation for serving as a caddie, a caddie-master or assistant caddie-master, or as a golf shop employee engaged in making, repairing or cleaning or selling golf merchandise.



JOHN M. WINTERS, JR.



MORRISON WAUD

**Rules of Golf:** 46,000 copies of the Association's new book "Golf Rules in Pictures" were distributed by Grosset & Dunlap, the publisher.

A Negotiating Committee has been appointed by the USGA President, Mr. Winters, Jr., to represent the Association at a quadrennial Rules of Golf conference with the Royal and Ancient Golf Club at Turnberry, Scotland, on May 18-19. The six USGA members are Wm. Ward Foshay, of New York, Chairman; Isaac B. Grainger, New York; Hord W. Hardin, St. Louis; Eugene S. Pulliam, Indianapolis; Richard S. Tufts, Pinehurst, N. C., and Joseph C. Dey, Jr., New York.

**Membership:** The Association's membership enjoyed a net gain of 109 Member Clubs and Courses, bringing the total to 2,657 and marking the 17th consecutive year of increase.

**Green Section:** The Visiting Service had an enrollment of 841 courses; 1,234 service visits were made.

**Museum:** Clubs of two Presidents were added, one each of General Dwight D. Eisenhower and Woodrow Wilson.

**Public Information:** A new committee explored methods of improving the lines of communication between the USGA and its Member Clubs and the golfing world.

**Finance:** Instead of a deficit as budgeted, the Association's operations in 1962 resulted in net income of \$28,492.

### **Patty Berg and O. J. Noer**

Miss Patty Berg, a professional since 1940, was enthusiastically applauded when she received the Bob Jones Award "For Distinguished Sportsmanship in Golf". It was presented by Henry H. Russell, of Miami, Fla., a USGA Executive Committee Member.

As an amateur, Miss Berg won the USGA Women's Amateur Champion-

ship in 1938, the Minnesota State title three times, the Trans-Mississippi Women's Amateur twice and the Titleholders Championship three times.

After becoming a professional in 1940, she won the Titleholders Championship four more times and the Women's Open Championship in 1946 before that event was conducted by the USGA. During 1962 she scored her 83rd tournament victory.

In her acceptance speech Miss Berg paid tribute to her late father, who was extremely close to her, for his advice in human relations. Miss Berg brought with her to the meeting some of the many medals she has won including one for winning a 65 yard race in grade school.

Past recipients of the Bob Jones Award have been Francis D. Ouimet, William C. Campbell, the late Mrs. Mildred D. Zaharias, Miss Margaret Curtis, the late Findlay S. Douglas, Charles Evans, Jr., Joseph B. Carr and Horton Smith.

O. J. Noer, recipient of the Green Section Award, was in charge of the Turf Service Bureau of the Milwaukee Sewerage Commission from 1926 through 1960.

The Award "For Distinguished Service to Golf Through Work with Turfgrass", was presented by John M. Winters, Jr., USGA President, and Henry H. Russell, Chairman of the USGA Green Section Committee.

Mr. Noer, who has devoted much of his professional career to extension work in fine turf problems, has probably visited and consulted on more golf courses throughout North America than any other agronomist.

A graduate of the University of Wisconsin in 1912, Mr. Noer became the State Soils Chemist in 1914 and was instrumental in establishing the first soils testing laboratory in this country. During World War I he served overseas as Captain in the Chemical Warfare Service.

In his remarks, Mr. Noer praised the Green Section saying "Old timers are aware of Green Section achievements, but the present generation may not know about them. The Green Section came to the rescue at times when golf turf was threatened with extinction. Each time the staff came up with the answer.

"Before World War I the bent seed used on greens came from Europe and was sold as mixed German bent. When seed was no longer available the Green Section developed the vegetative method of planting creeping bent grass stolons and were responsible for named

strains such as Washington, Metropolitan, Congressional, etc. Some are still popular.

"... Through the Green Section the USGA has pioneered in providing its members, and others, with answers to turf grass problems."

The first Green Section Award was received in 1961 by Dr. John Monteith, Jr., of Colorado Springs, Colo. Prof. Lawrence S. Dickinson, of Amherst, Mass., was the 1962 recipient.

Each of the two award winners received a replica of the original award, which hangs in "Golf House".

## USGA PUBLICATIONS OF GENERAL INTEREST

(Publications are available from the United States Golf Association, 40 East 38th Street, New York 16. Please send payment with your order.)

### RULES

**THE RULES OF GOLF**, as approved by the United States Golf Association and the Royal and Ancient Golf Club of St. Andrews, Scotland. Booklet 25 cents (special rates for quantity orders, more than 500). Clubhouse edition, suitable for hanging, 6 1/4" x 9 1/2"; supply limited. \$1.50.

**GOLF RULES IN PICTURES**, published by Grosset and Dunlap, compiled by Joseph C. Dey, Jr., USGA Executive Director. 96 pages, 8 1/2 x 10 3/4 inches, \$1.95.

**DUTIES OF OFFICIALS UNDER THE RULES OF GOLF**, a reprint of a USGA Journal article that contains a check list of the duties of the referee and other committee members on the course. No charge.

### HANDICAPPING

**USGA GOLF HANDICAP SYSTEM FOR MEN**, containing recommendations for computing USGA Handicaps and for rating courses. Booklet 25 cents. USGA Slide Rule Handicap per 25 cents. Poster 15 cents.

**THE CONDUCT OF WOMEN'S GOLF**, containing suggestions for guidance in the conduct of women's golf in clubs and associations, including tournament procedure, handicapping and course rating. 35 cents.

**COURSE RATING POSTER** for certifying hole by hole ratings to a club; for association use, size 8 1/2 x 11 inches, 5 cents, \$3.50 per 100.

**COURSE RATING REPORT**, a form for rating a course hole by hole; for association use, size 4 1/4 x 7 inches, 10 cents, \$7.50 per 100.

**USGA HANDICAP RECORD FORM**, revised in 1961, provides for the listing of 75 scores. It is designed for ease in determining the last 25 differentials from which to select the lowest 10 when more than 25 scores are posted. \$3 for 100.

**HANDICAPPING THE UNHANDICAPPED**, a reprint of a USGA Journal article explaining the Callaway System of automatic handicapping for occasional players in a single tournament. No charge.

### GREEN SECTION

**A GUIDE FOR GREEN COMMITTEE MEMBERS OF GOLF CLUBS**, 16-page booklet. 25 cents.

**GOLF COURSE REBUILDING AND REMODELING — FACTORS TO CONSIDER**, article in USGA Journal by A. M. Radko. No charge.

**THE GOLF COURSE WORKER—TRAINING AND DIRECTION**. No charge.

**HOW TO MEET RISING COSTS OF GOLF COURSE MAINTENANCE, PARTS I & II**, panel discussions. No charge.

**WATER USE ON THE GOLF COURSE**, panel discussions. No charge.

### COMPETITIONS

**PREPARING THE COURSE FOR A COMPETITION**, reprint of USGA article by John P. English. No charge.

**TOURNAMENTS FOR YOUR CLUB**, a reprint of a USGA article detailing various types of competitions. No charge.

### GENERAL

**RECORD BOOK OF USGA CHAMPIONSHIPS AND INTERNATIONAL EVENTS, 1895 through 1961**. Hard cover, 224 pages, 9 x 11 inches. \$5.00.

**ARE YOU A SLOW PLAYER! ARE YOU SURE?** A reprint of a USGA Journal article by John D. Ames. No charge.

**A JUNIOR GOLF PROGRAM FOR YOUR CLUB AND DISTRICT**, a 16-page booklet on organizing and developing junior golf programs at different levels by the USGA Junior Championship Committee. No charge.

**PROTECTION OF PERSONS AGAINST LIGHTNING ON GOLF COURSES**, a poster. No charge.

**USGA JOURNAL AND TURF MANAGEMENT**, a 33-page magazine published seven times a year. \$2 a year.



## USGA WALKER CUP TEAM HAS THREE NEW MEMBERS

Teams Will Meet  
May 24-25  
in Scotland

Three newcomers to USGA international competition join seven veterans in representing the United States in the biennial match for the Walker Cup against a British amateur team May 24-25 in Turnberry, Scotland.

The 10 American players are, in alphabetical order:

Deane R. Beman, Arlington, Va.  
Charles R. Coe, Oklahoma City, Okla.  
Richard D. Davies, Pebble Beach, Calif.  
Robert W. Gardner, Essex Fells, N. J.  
Downing Gray, Pensacola, Fla.  
Labron Harris, Jr., Stillwater, Okla.  
William J. Patton, Morganton, N. C.  
Richard H. Sikes, Springdale, Ark.  
Charles B. Smith, Gastonia, N. C.  
Dr. Edgar R. Updegraff, Tucson, Ariz.

The three newcomers are Davies, Gray and Updegraff. Harris and Sikes are new to Walker Cup Competition but were members of the United States World Amateur Team that played in Japan last year.

Davies is the current British Amateur Champion. Gray was runner-up to Harris in the 1962 Amateur Championship. Dr. Updegraff has won many local, state and sectional tournaments and was third alternate for the 1961 team.

Coe and Patton are the real veteran competitors. Coe was a member of the teams in 1949-51-53-59-61. He was Non-playing Captain of the 1957 team and played as Captain in 1959. Patton was previously a member in 1955-57-59. Beman is making his third appearance while Gardner and Smith are making their second.

Richard S. Tufts of Pinehurst, N.C., a former President of the USGA, will



RICHARD S. TUFTS

be non-playing Captain of the team which will leave New York by airplane on May 16.

If any player does not accept the invitation to make the trip abroad, an invitation will be issued to one of the following Alternates, in the order listed: William Hyndman, III, Huntingdon Valley, Pa.; Homero Blancas, Jr., Houston, Texas, and H. Dudley Wysong, Jr., McKinney, Texas.

The opposition has not yet been named. Fifteen of Great Britain's finest have been invited to play in a Walker Cup Trial to be held April 12-15 in Turnberry. The Trial will be run on the round-robin principle and all players will play each other over 18 holes in singles and three-ball matches over eight rounds in the four days. Upon conclusion 10 players will

be chosen to represent Great Britain.

This year the match will be played under a revised format, each game at 18 holes instead of 36. There will be four 18-hole foursomes each morning and eight 18-hole singles each afternoon. Thus a maximum of 24 points will be at stake, twice as many as formerly.

The United States won the last match, in 1961, at Seattle, Wash., by 11 to 1.

## NEW MEMBERS OF THE USGA

### REGULAR

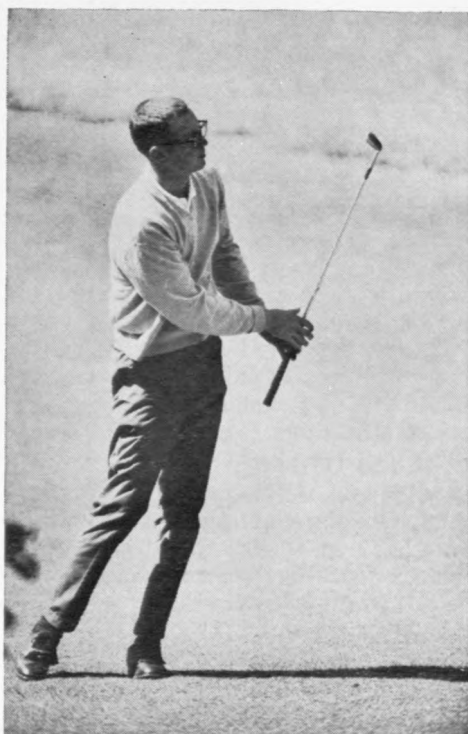
- Calif. Lake Tahoe Golf Club, Altahe  
Fresno Airways Golf Club, Fresno  
Merced Golf and Country Club, Merced  
Oakdale Golf and Country Club  
Oakdale  
Sierra Sky Ranch Golf and Country Club  
Oakhurst
- Fla. Corral De Tierra Country Club, Salinas  
Sunset Golf Course Association  
St. Petersburg  
DeSota Lakes Golf and Country Club  
Sarasota
- Ga. Marietta Country Club, Marietta
- Ind. Tipton Golf Association, Tipton
- Ky. Hopkinsville Golf and Country Club  
Hopkinsville
- Mich. Signal Point Club, Niles
- Miss. Back Acres Country Club, Senatobia
- Mo. Southview Golf Club Association, Belton
- N. M. Silver Golf Club, Silver City
- N. Y. Tam O'Shanter Golf Club, Brookville  
East Meadow Golf Club, East Meadow  
Muttontown Golf and Country Club  
Muttontown  
Indian Hills Country Club  
Northport RD  
The Woodcrest Club, Syosset
- N. C. Chapel Hill Country Club, Chapel Hill
- Pa. Lake Arthur Country Club, Butler
- S. C. Surf Golf and Beach Club  
Ocean Drive Beach
- Texas Big Spring Golf Association, Big Spring  
Perryton Country Club, Perryton
- Wis. Parc-wood Country Club, Mequon

### ASSOCIATE

- Calif. Rancho Bernardo Country Club  
Escondido
- Ga. Green Island Club, Columbus
- Mich. Twin Elms Golf Club, Clare
- Minn. Medina Golf Course, Wayzata
- N. C. Lakeshore Golf Course, Durham
- Texas Lions Municipal Golf Course & Golf  
Course #3, Austin

### FOREIGN SUBSCRIBERS

- Jamaica Half Moon-Rose Hall Golf Club  
Montego Bay



Labron Harris at Pinehurst



Richard Davies at Holyoke

## GOLFERS INVEST \$464,000 IN COLLEGE AID TO CADDIES

Karl Pfitzer  
story is example  
of their success

Karl Pfitzer came to this country from Austria several years ago with his mother and younger brother as displaced persons. For six years he caddied at the Northland Country Club, Duluth, Minn., and was selected as an Evans Scholar for the University of Minnesota.

At the University he compiled the best scholastic record of any of the 1,350 Scholars in the history of this program. Of 60 grades, he had 53 A's over a four-year period. Last year he was awarded a three-year grant at \$3,000 per year by the National Aeronautics and Space Administration (NASA), the agency which develops all space work for the United States.

The story of Karl Pfitzer is one of many accounts of personal growth and civic usefulness evolving from the numerous programs concerned with educating young men who have been or are now caddies. There are at least 18 such programs of considerable scope.

The largest is the Evans Scholars Foundation, sparked by Charles Evans, Jr., 40 years ago and now administered by the Western Golf Association. It operates coast to coast. Other golf associations have adopted similar programs and eight are now affiliated with the Evans Foundation.

All told, approximately 2,000 ex-caddies have received college scholarships of varying amounts from 18 organizations.

Scholarships generally are awarded on a competitive basis to caddies who work either at member clubs of the sponsoring associations or in a specified geographical area. Boys eligible for Evans Scholars assistance must be



Karl Pfitzer, right, received the Evans Scholars Foundation "Scholar of Year" award when an undergraduate at the University of Minnesota from Frederic H. Corrigan of Minneapolis, Western Golf Association Vice-President.

graduated in the upper 25 percent of their class and must require financial aid. No caddie scholarship program lists golfing ability as a factor of eligibility.

These 18 programs assisted 787 boys in college in the 1960-61 school year—an increase of 70 over the previous term. Of the total, 237 were freshman awards. For 1961-62 there were 842 caddies in college; 262 scholarships were new. Presently there are 905 scholars. Tuition and housing are offered all Evans Scholars. The other nine programs provide aid in a range from \$100 to \$1,510, usually in the amount actually needed. The cost to all 18 programs for the 905 scholars



now in school is a total of \$464,220; an average of \$513.

The programs listed below share in grants from the National Golf Fund in its disbursement of receipts from the annual National Golf Day sponsored by the Professional Golfer's Association of America:

#### INDEPENDENT PROGRAMS

J. Wood Platt Caddie Scholarship Trust  
c/o Mrs. C. Joseph Burnett, Exec. Secy.  
29 Bala Ave.  
Bala-Cynwyd, Pa.

Richard D. McDonough  
Caddie Scholarship Fund  
c/o Leonard Sweeney  
1 Main St.  
Nashua, N. H.

Reinach-Turnesa Caddie  
Scholarship Fund, Inc.  
c/o James R. Hand, Treasurer  
National Bank of Westchester Bldg.  
31 Mamaroneck Ave.  
White Plains, N. Y.

State of Maine Caddie Fund  
c/o J. E. McCabe  
32 Court St.  
Bath, Maine

New Jersey State Golf Association  
Caddie Scholarship Foundation  
c/o N. J. McDonald  
36 Butler St.  
Elizabeth 1, N. J.

Francis Ouimet Caddie Scholarship Fund  
c/o Arthur E. Butters  
40 Trinity Place  
Boston, Mass.

Cleveland District Golf Association  
Caddie Foundation  
c/o Martin Morrison, Chairman  
Federal Reserve Bank  
Cleveland 1, Ohio

Rhode Island Golf Association  
John P. Burke Memorial Fund  
c/o Ralph R. Crosby  
58 Weybosset St.  
Providence, R. I.

Western Pennsylvania Golf Association  
Caddie Welfare Foundation  
c/o E. R. Braun, Jr.  
105 Cathedral Mansions  
4716 Ellsworth Ave.  
Pittsburgh 13, Pa.

#### AFFILIATED WITH THE EVANS SCHOLARS FOUNDATION

Evans Scholars Foundation  
c/o Marshall Dann  
Western Golf Association  
Golf, Ill.

Marue A. Carroll Caddie Scholarship Fund  
First National Bank Bldg.  
206 W. College Ave.  
Appleton, Wis.

Pacific Northwest Golf Association  
Caddie Scholarship Fund  
Executive Secretary  
701-1411 Fourth Avenue Bldg.  
Seattle 1, Wash.

Allis Caddie Scholarship Fund  
The Louis Allis Co.  
Milwaukee 1, Wis.

Golf Association of Michigan  
640 Temple Ave.  
Detroit, Mich.

Kansas City Caddie Scholarship Fund  
Sifers Valomilk Confection Co.  
2001 Main St.  
Kansas City 8, Mo.

Illinois Women's Golf Association  
Caddie Scholarship Fund  
1041 Brittany Road  
Highland Park, Ill.

Philadelphia PGA Caddie  
Scholarship Fund  
Atlantic City Country Club  
Northfield, N. J.

Minnesota Caddie Scholarship Fund  
713 Grain Exchange Bldg.  
Minneapolis 15, Minn.  
c/o James R. Hand, Treasurer

NOTE: For information on any of these  
contact: Western Golf Association  
Golf, Ill.

What is bright young Karl Pfitzer up to now? Following is an excerpt from a letter he sent to the Western Golf Association last fall:

"I have chosen cosmic ray research as my specific field of study. Upon the recommendation of my adviser I am by-passing the Master's degree and working directly for the Ph.D. degree . . . During the second quarter of the past year I began to take an active part in research. I started helping in the developmental work of a 'magnetic electron spectrometer', an instrument that both counts electrons and measures their varying energies. This instrument is being developed for flight aboard an upcoming series of satellites. However, presently our work has been diverted to perfecting this instrument as quickly as possible for measuring the artificial radiation belt produced by the July 9 H-bomb blast in space."

# **NEW USGA MOTION PICTURES ON OAKMONT AND PINEHURST**

12 Films Now  
Available from  
"Golf House" Library

**T**wo new motion pictures have been added to the "Golf House" Film Rental Library, after being enthusiastically received at the USGA's 69th Annual Meeting in January. Both films are 16 millimeter, in color, with sound.

One film is "Oakmont and the Open", which runs 33 minutes. It is a semi-documentary of the Oakmont Country Club near Pittsburgh, has flashbacks in black and white of the USGA Open Championships won there in 1927-35-53 by Tommy Armour, Sam Parks, Jr., and Ben Hogan, and round-by-round action in the 1962 Open, including the play-off between Jack Nicklaus and Arnold Palmer.

The second new USGA film is "Famous Golf Courses: Pinehurst No. 2". It presents an unusual insight into golfing tactics through analysis of problems created for the players by the architects of the splendid course in North Carolina. Leading players are seen in action in the 1962 USGA Amateur Championship, won by Labron Harris, Jr. Charles Evans, Jr., is shown playing in the Championship for the fiftieth time—an all-time record. Running time is 17 minutes.

These two motion pictures join 10 others in the "Golf House" Film Library. All are 16mm. sound films and 10 of them are in color.

The Association has announced a reduction in rental prices. Effective immediately, all films may be rented at \$10 each per showing with the exception of "Oakmont and the Open" for which the rental is \$20. Sales prices of films will be furnished upon request.

Orders for rentals should be addressed to the United States Golf Association, 40 East 38th Street, New York 16, N. Y. Four weeks should be allowed for filling of orders.

The Film Library is divided into two sections: Rules of Golf Dramatizations, which includes three films, and Entertainment, History, Travel. Under the latter category are nine of the films including the two newest ones.

Many Clubs and Associations find that by renting several films for an evening's showing their audience may be treated to a session of Rules, outstanding competitions and a pictorial visit to some of the world's great courses.

Following are general descriptions of the 10 additional films available:

## **Rules of Golf Dramatizations**

### **"THE RULES OF GOLF—ETIQUETTE"**

A family four-ball match stresses the importance of right relations to other players and to the course. Ben Hogan appears in several scenes. Robert T. Jones, Jr., makes the introductory statement. A "must" for every golfer. 17½ minutes

### **"PLAY THEM AS THEY LIE"**

The Rules of Golf for fairway and rough. Johnny Farrell, the 1928 U. S. Open Champion, acts as intermediary between Wilbur Mulligan, a beginner of unimpeachable integrity, and Joshua P. Slye, a past master in the art of breaking the Rules. Filmed at Baltusrol Golf Club, Springfield, N.J. 16½ minutes

### **"ON THE GREEN"**

The Rules governing situations on the putting green. Photographed at the Mid-Ocean Club, Bermuda. 17 minutes

## **Entertainment, History, Travel**

### **"GREAT MOMENTS IN GOLF"**

Eight Champions are seen with the many interesting exhibits in "Golf House," home of the USGA

Golf Museum and Library, and in flashbacks of their playing days. Robert T. Jones, Jr., during his "Grand Slam" . . . Ben Hogan . . . Francis Ouimet Gene Sarazen . . . Charles Evans, Jr. . . . Findlay S. Douglas . . . Mrs. Glenna Collett Vare . . . Margaret Curtis. Black and white. 28 minutes

### **"WALKER CUP HIGHLIGHTS"**

Historic events in golf's oldest team competition between Great Britain and the United States. Robert T. Jones, Jr., Francis Ouimet and other great players are shown. First half, black and white; second half, beautiful color sequences of the 1959 Match at Muirfield, Scotland. 16 minutes

### **"ST. ANDREWS, CRADLE OF GOLF"**

Beautiful scenes of the historic town of St. Andrews in Scotland and its Old Course, with unusual interior scenes of the Royal and Ancient Golf Club. An award winner for 1959.

### **"FIRST WORLD AMATEUR TEAM CHAMPIONSHIP FOR EISENHOWER TROPHY"**

Twenty-nine countries compete in golf's newest major event at St. Andrews, Scotland. Climaxed by

play-off in which Australia defeats the United States to become the first winner of the Eisenhower Trophy. 14 minutes

### **"GOLF'S LONGEST HOUR"**

Cary Middlecoff sets a target at which Ben Hogan, Julius Boros and Ted Kroll aim in vain, as Dr. Middlecoff wins the 1956 U. S. Open Championship at Oak Hill Country Club, Rochester, N. Y. 17½ minutes

### **"SECOND WORLD AMATEUR TEAM CHAMPIONSHIP FOR EISENHOWER TROPHY"**

International friendships are furthered as 32 countries play at Merion Golf Club near Philadelphia. The United States is the winner, paced by remarkable play by Jack Nicklaus. President Eisenhower is shown receiving the American and the Australian teams at the White House. 17 minutes

### **"FAMOUS GOLF COURSES: SCOTLAND"**

Picturesque and famous holes on the great courses at Troon, Prestwick, Carnoustie, St. Andrews, North Berwick and Muirfield. The distinctive aspects of Scottish linksland are seen at their finest. 18 minutes



On the last green of their 18-hole play-off for the 1962 USGA Open Championship Arnold Palmer is shown as he stooped to pick up a ball marker belonging to Jack Nicklaus. This photograph was taken from the 16 mm. film "Oakmont and the Open" which includes details of this and other moments of Championship action.



# USE OF PICK-UP HOLE SCORES AND "NO CARD" FOR HANDICAPS

USGA Position  
Stated on  
"Stroke  
Controls"

What are the guide lines for estimated scores on pick-up holes and for recording "no-card" in a player's handicap history?

Bothersome questions have arisen as a result of some players abusing USGA regulations on these points. Abuse apparently was a means for the player to reduce scores in order to keep the handicap relatively low and thus to be eligible for certain events.

The USGA Golf Handicap System provides as follows (Section 4-3, or 15-3 in "The Conduct of Women's Golf"):

"Scores that include some conceded putts are acceptable.

"For occasional holes, not exceeding two per round, where a player has picked up without concession, the handicapper or the player shall record scores (for handicap purpose only) as follows:

"a. Two over par if the player's handicap is 18 or less.

b. Three over par if the player's handicap is 19 or more.

"When pick-up holes exceed two per round, the score shall be returned and entered in the player's scoring record as "No Card" (or "N.C.") so that the handicap will still be based on the best 10 of the last 25 rounds player."

A decision bearing on these points and on reasons why so-called "stroke controls" are not embodied in the USGA System has been issued by the Handicap Procedure Committee to Mrs. H. F. Wohlers, of the Women's Southern California Golf Association, San Diego, in part as follows:

USGA Handicap Decision 62-12  
References:

Men—Section 1-1a-, 4-1, 4-3, 7-1, 8-2c

WOMEN—Section 12-1a, 15-1, 15-3, 18-1, 19-2c

The use of "N.C." in the scoring record is without a doubt the most unpopular procedure ever introduced in this section,

said Mrs. Wohlers. For "pick-up" holes, players have generally adopted the habit of picking up on two holes of a round as a means of "stroke controls". In most cases, the player picks up after reaching the green in order to avoid the high score for the hole in favor of the lesser "X".

On the subject of "N.C.'s", because of problems relative to our section, club committees have found it necessary to establish as a condition of play in best-ball events, "Pick up whenever your ball is out of contention". Under this condition, it is possible for a player to record a score as her ball could be in contention on all 18 holes; however, it is quite improbable. These best-ball events are increasing in popularity.

The following questions have been asked of me and I would appreciate your views (the answers are the USGA's):

**STROKE CONTROLS: Why USGA System Does Not Employ.**

**PICK-UP HOLES: Why Rounds with Pick-up Holes Used in Computations**

**Q. 1: Why Does the USGA condemn "stroke controls", then allow players to pick up on two holes and adjust their scores?**

**A. 1: The USGA Handicap System does not employ "stroke controls" because of other balancing features. "Stroke controls" are not needed in a system under which handicaps are computed from the lowest 10 of the last 25 scores. The lowest 10 scores in most cases would not contain individual hole scores which would be subject to stroke controls. In other words, a player's better scores would in most cases be void of "bad holes". Also, the use of stroke controls creates more work for the handicap committee. This would be a burden, especially in small, modestly-equipped clubs. A national system of handicapping must be relatively simple to operate.**

The USGA Handicap System provides for the return of rounds which include no more than two pick-up holes (Section 15-3 of "The Conduct of Women's Golf") to prevent loss of 18-hole scores which give a fairly accurate picture, for handicap purposes, of a player's ability. When pick-up holes exceed two in a round that benefit is lost, but the score should be

returned and entered in the player's record as "No Card" (or "N. C.") so that the handicap will still be based on the best 10 of the last 25 rounds played.

**PICK-UP HOLES: When Permissible to Employ Provision**

**Q. 2:** Are you allowed to pick up only when in trouble?

**A. 2:** There is no restriction on when a player may pick up in match play. It would be difficult to define when a player is justified in picking up, insofar as handicapping principles are concerned. Almost all players pick up on occasion because of a lost ball or some other difficulty; it is for occasions such as this that the pick-up provision is intended.

When players employ the pick-up provision for the purpose of adjusting their scores, and thereby adjusting their handicaps, they are not entitled to USGA handicaps. This would apply to a player who, upon reaching the green, determines that she will be able to return a lower score if she picks up on the hole, and does so only for that reason.

**CONCEDED PUTTS, SCORES WITH: Must be Accepted by Handicapper**

**Q. 3:** Section 15-3 states: "Scores that include some conceded putts are acceptable." Does this mean that the Handicap Chairman decides if the score is acceptable?

**A. 3:** The Handicap Committee is required to accept for handicapping purposes scores which include some conceded putts.

**PICK-UP HOLES: Provision is Exception to Rule Requiring that Scores Be Made Under Rules of Golf**

**Q. 4:** If acceptable scores "must be made for 18-hole rounds under the Rules of Golf" as provided in Section 15-1, how can you accept scores which include pick-up holes?

**A. 4:** When a player picks up on one or two holes, but plays out the rest of the holes, the provision requiring the return of such scores (for handicapping purposes only) is exception to the basic rule requiring that all scores be made under the Rules of Golf. In match play, it is not contrary to the Rules to pick up.

**"NO CARD" SCORES: When Permissible to Prohibit Return**

**Q. 5:** If it is necessary to record an "N. C." for a round of golf in which you have picked up on most of the holes and there isn't a semblance of a game, why isn't it necessary to record every "practice round" or every time you go on the practice tee? This probably improves your game more than anything else.

**A. 5:** It would be unusual for a player to pick up on most of the holes during a

round unless she were in a four-ball competition such as the one you describe. In such unusual circumstances, the Handicap Committee would be justified in refusing to accept "N. C." scores on that particular day.

"N. C." scores are included in a player's record because, when the provision is not taken advantage of, such scores help to give a fairly accurate picture of a player's ability. Possibility of improvement of the player's game does not enter into the question.

**RAISE IN HANDICAP: Not to be Limited if Earned**

**Q. 6:** Section 19-2c says: "An increase shall not be granted because a player is temporarily off her game . . ." Would a player with a 7 handicap one month be entitled to a 3-stroke raise the next month? How do you determine when a player is off her game? To what degree must she be off her game?

**A. 6:** Section 19-2c refers only to automatic increases. It does not mean that a player who earns a higher handicap because of her recent scoring record would not be entitled to any higher handicap earned.

**RAISE IN HANDICAP: Limiting to Certain Number of Strokes Prohibited SCORES ACCEPTABLE: (1) Limiting to those made in Competition Prohibited (2) Limiting to those made on Courses Rated by Local Association Prohibited**

**Q. 7:** A suggestion has been made that there should be a limit on the number of strokes a player may be raised in one month and no limit on the number of cuts. It has also been suggested that we had less trouble, better balanced handicaps and more incentive to improve our games when we used only the scores made in competition and on courses rated by our own rating committee.

**A. 7:** Limiting the number of strokes a player's handicap may be raised during any period would defeat the purpose of the handicap system—to provide equitable handicaps to everyone based on present scoring ability.

It would be misleading and impractical to use only scores made in competition in handicap computations. Such procedure would make it impossible for players who do not play competitively to obtain a handicap; it would be contrary to the USGA's belief that as much scoring information as reasonably possible should be used in computations. See Section 18-1.

It would also be contrary to the belief above to use only scores made on courses rated by a single Committee, and to disregard scores on courses rated by other competent committees.

# **GOLF OFFICIALS TO CONFER AT USGA REGIONAL MEETINGS**

Meeting to be Held  
in Seattle, Dallas,  
Atlanta, Tifton, Ga.

**O**fficials of golf clubs and associations will exchange information and ideas in a series of conferences during March and April in Seattle, Wash.; Dallas, Texas; Atlanta and Tifton, Ga.

The meetings will be in two series, as follows:

1. USGA Green Section Educational Programs on "Traffic On the Golf Course," for two representatives of each USGA Member Club.

2. Conferences of Golf Officials to discuss Rules of Golf, handicapping and course rating, tournaments, club affairs, association affairs, amateur status, programs for juniors and seniors. Morning meetings will be held for representatives of golf associations; afternoon meetings for representatives of USGA Member Clubs and golf associations.

The schedule:

**At Seattle—Washington Athletic Club**  
Monday, March 18—Green Section Educational Program

Tuesday, March 19—Conference of Golf Officials

**At Dallas—Baker Hotel**

Wednesday, March 20—Green Section Educational Program

Thursday, March 21—Conference of Golf Officials

**At Atlanta—Dinkler Plaza Hotel**

Saturday, March 23—Conference of Golf Officials

**At Tifton, Ga.—Abraham Baldwin College**

Tuesday, April 9—Green Section Educational Program (in conjunction with Southeastern Turf-grass Conference).

All meetings will be held in morning and afternoon.

Similar meetings were conducted last year for the first time, under USGA auspices, at Washington, Chicago and San Francisco. Their usefulness has resulted in an annual program.

In the Green Section meetings on "Traffic on the Golf Course," the following topics will be considered:

The Traffic Problem

Planning of Traffic—Distribution and Control

Planning of Golf Course Features

Roads on the Golf Course

Effects of Traffic on Turf

Effects of Traffic on Soils

Maintenance Practices Which Will Overcome Harmful Effects of Traffic

Care and Handling of Golf Carts

Chairmen will be Edward A. Dunn at Seattle, L. A. Stemmons, Jr., at Dallas, and Henry H. Russell at Tifton.

USGA committee and staff members will join with officials of clubs and associations in presenting the several programs.

Those attending the Conference of Golf Officials will see the two new USGA films "Oakmont and the Open" and "Famous Golf Courses: Pinehurst No. 2".

The response to the inaugural series last year was most gratifying. In these meetings club and association representatives participated with questions of speakers and of each other. It was during these sessions that the basic idea of exchange of information bore fruit.





# THE REFEREE

## Decisions by the Rules of Golf Committees

Example of Symbols: "USGA" indicates decision by the United States Golf Association. "R & A" indicates decision by the Royal and Ancient Golf Club of St. Andrews, Scotland. "62-1" means the first decision issued in 1962. "D" means definition. "R. 37-7" refers to Section 7 of Rule 37 in the 1962 Rules of Golf.

USGA 62-33

D. 6, R. 9

### ADVICE: LOOKING INTO OPPONENT'S BAG NOT PROHIBITED

**Q:** A and B are partners playing against C and D. During the match, after A has made a shot to the green, C walks over to A's bag and overtly looks into the bag to ascertain the club used by A in the shot. Is C in violation of Rule 9-1 (giving or asking for advice)?

Question by: GEORGE A. SAUNDERS  
Metairie, La.

**A:** No. In our administration of the Rules a distinction has been drawn between "advice" given consciously by another, as described in Definition 2, and information obtained solely by one's own observation.

It would not be practicable, for example, for the Rules to provide, or for Definition 2 and Rule 9 to be construed, that a player may not watch another player's stroke or the reaction of the ball when struck. The same sort of assistance can be had from such observation as from seeing the number marked on the club played. Similarly,

a distinction must clearly be made between (1) a player watching the roll of another ball on the putting green, and (2) his asking another player for information about the line of putt.

Definition 2 provides that "advice" is "any counsel or suggestion", etc. The words "counsel or suggestion" imply consultation in some manner with another person who is privy to and cooperative with the aim of the player seeking such consultation. In this case, C's action was solely observation.

USGA 62-23

D.5, 6; R. 5, 11-4, 21-1, 21-3

### OUT OF BOUNDS: BALL THOUGHT TO BE OUT OF BOUNDS FOUND IN BOUNDS AFTER STROKE WITH ANOTHER BALL

**Q:** In stroke play, a competitor believes his second shot is out of bounds after he looks for it in bounds. He returns to the place from which he played his second shot, drops another ball and plays it.

His first ball is then found in bounds. He abandons the second ball

and completes the hole with the first ball.

The committee disqualified the competitor for abandoning the second ball. Was the Committee's ruling right?

A: If the first ball was lost or declared lost under Definition 6, the Committee's ruling was right. The second ball was then the ball in play (Definition 5), and the competitor was obliged to complete the hole with it — see Rule 21-3.

However, if the first ball was not lost or declared lost under Definition 6, the Committee's ruling was wrong. The original ball was the ball in play, under Definition 5. Rule 21-1 obliged the competitor to hole out with the original ball, which he did. The competitor should be penalized two strokes for playing the second ball. The Rules do not permit play of a ball under a Rule which does not govern the particular case. By applying the Rule of equity (11-4) and the General Penalty (Rule 5), the principle established in Rule 21-3 concerning play of a ball other than the player's own ball is followed.

USGA 62-22

R. 35-1e

Note: This supersedes Decision 57-26

**LINE OF PUTT: TOUCHING  
PUTTER TO GREEN BEHIND  
BALL WHILE DETERMINING  
LINE NOT PROHIBITED**

Q: Please clarify Rule 35-1e for me. Does this mean that the putter or any part of it shall not touch the ground in back of the ball except in addressing the ball? For example, would the following breach the Rule if done behind the ball.

(1) Laying the putter on the green lengthwise behind the line to the hole?

(2) Crouching with putter extended before you and heel of putter touching the green?

(3) Placing toe of putter directly in back of ball touching the green, and the swiveling the putterhead around in

position for the stroke?

(4) Laying putter directly behind ball, walking to opposite side of hole to sight the line, and then returning to putt?

A: In none of the above cases would the player breach Rule 35-1e or any other Rule unless by his actions a mark to indicate the line of putt is placed on the putting green and left there during the play of the stroke.

USGA 62-32

R. 11-4, 17-1, 24-4, 33-1, 40-3i

**BUNKER: RAKED TO RESTORE  
ALTERED LIE OF ANOTHER  
PLAYER. LIE: ALTERED BY  
ANOTHER PLAYER — BUNKER  
RAKED TO RESTORE**

Q. 1: Two balls belonging to the same side came to rest in a sand trap. The balls lie within two club-lengths of each other. B, the player farther from the hole, requests that his partner A lift his ball. B makes his shot, and alters the lie of A's ball. B then rakes the trap of any irregularities. A then places his ball on the spot from which it was lifted and plays his shot. Is this permissible under the Rules of Golf?

A. 1: Rule 24-4 required A to replace his ball as near as possible to the spot from which it was lifted and in a line similar to that which it originally occupied. If that was done, neither A nor B broke any Rule. If not, A would be disqualified for the hole under Rule 24-4. If B's raking prevented A from proceeding in accordance with Rule 24-4, B also should be disqualified for the hole under Rule 11-4 (the rule of equity) and the principles of other rules, e. g. Rule 17-1, Rule 33-1, or the proviso to Rule 33-1g and 40-3i.

Q. 2: Would the same Rule apply if the two players were opponents?

A. 2: Similar principles would apply in a singles match. If B's raking prevented A from proceeding in accordance with Rule 24-4, A could claim the hole under Rule 11-4 and the principles of other Rules. If not, A would be re-

quired to proceed in accordance with Rule 24-4.

**Q. 3:** What would be the ruling in individual stroke play?

**A. 3:** In individual stroke play, the same Rule 24-4 would apply with respect to A, but B as a fellow-competitor would incur no penalty regardless of the results of his raking.

Question by: ROBERT L. UTZ  
Rancho Sante Fe, Calif.

USGA 62-29

R. 22-3a, 23 (Preamble)

### **PUTTING GREEN: BALL PLAYED FROM WRONG PLACE**

**Q:** A lot of us mark each other's ball on the putting green, and that is how this incident happened. A marked B's ball and dropped it on the green about two feet away from the original spot. B was not aware of A's action; and when it was her turn to putt, B putted from where the ball was dropped. A did not realize what B was doing until after B's stroke was made, at which time A called B's attention to the fact that she had putted from the wrong place. B moved her ball to the original spot and putted over. She missed both times.

Is there a penalty?

Question by: NOBUO HAYASHI  
Hilo, Hawaii

**A:** Lifting and marking a ball by any person at the request or with the consent of the owner is deemed to be the act of the owner; and the owner is subject to the appropriate penalty if a Rule is violated in the process. From the statement in the question indicating that the incident happened as a result of a practice of marking each other's ball on the putting green, it may be inferred that A's marking of B's ball was with B's tacit if not express consent.

Assuming the inference to be correct, in failing to replace her ball on the original spot, B breached Rule 22-3a, which provides: "On the putting

green of the hole being played, when a ball is lifted under a Rule or Local Rule or when another ball is to be played, it shall be placed on the spot where the ball lay, except when a Rule permits it to be placed elsewhere."

Penalty for breach of Rule 22-3a is: Match play—Loss of hole; Stroke play—two strokes. See also Rule 35-2a for match play and 35-3a for stroke play. In stroke play, the penalty would be added to the score made with the ball putted from the wrong place; the score made with the ball putted from the right place would not count.

This incident points up the inadvisability of players making a practice of marking balls for fellow-competitors or opponents. The preamble to Rule 23 provides in part: "A ball to be lifted under the Rules or Local Rules should be lifted by the owner or his partner or either of their caddies."

USGA 62-30

R. 22-3a, 40-3i

### **PUTTING GREEN: BALL PLAYED FROM WRONG PLACE — PUTTED FROM SPOT WHERE PARTNER'S BALL MARKED**

**Q:** During four-ball match play A marks his ball and the ball of B on the putting green. In error, B replaces his ball on A's mark with the knowledge of C and D that he is replacing his ball in wrong location. B putts and is then told by C and D that he putted from the wrong location. What rule applies and what, if any, is the penalty?

Question by: ROBERT K. HOGARTY  
Northfield, Ill.

**A:** Assuming A and B are partners, B should be disqualified for the hole for breach of Rule 22-3a. If it were found that the action had been taken so as to assist A's play, A should also be disqualified for the hole under Rule 40-3i.

The Rules do not require C and D to warn B that he was about to breach a Rule, but it would have been an act of good sportsmanship if they had done so.



Better Turf for Better Golf

# TURF MANAGEMENT

from the USGA Green Section

## *Education Never Stops in This Business*

By EMILIO STRAZZA

Superintendent, Round Hill Club, Greenwich, Connecticut

The Northeastern region was subjected to a very severe drought during the spring and summer of 1962. Our Round Hill Club seemed to be in the center of the area most severely affected by the absence of rainfall. To cite an old cliché, "It's an ill wind that blows nobody good" and this was indeed true in my case. In past years it was my practice to irrigate fairways frequently, and I tried to put on the equivalent of approximately  $\frac{1}{2}$  inch rainfall per application. Although this method was never entirely satisfactory, it appeared to be the best that we could do with the fairway watering system that we had. The sum total of our output is 150 gallons per minute.

The severity of the early spring drought in '62 prompted me to re-examine standard irrigation practices of former years as it appeared evident that we could not hold our turf to the satisfaction of our membership or our workers if the drought were prolonged. After 40 years as Superintendent at the Round Hill Club I felt I could afford to gamble a bit so after some discussion with two trusted employees of long standing, Gus Powell, foreman,

and Francis Chiappetta, mechanic, I decided to alter our former technique by watering deeper, but watering less frequently. We therefore changed our technique to put out four sprinkler heads at night for nine hours at a setting. This provided the equivalent of 3 inches of rainfall per irrigation. To the surprise and satisfaction of both the club members and ourselves we found this deep, infrequent watering resulted in a uniform penetration of moisture to a depth of 15 inches. The turf and soil was never overly wet or soggy after irrigation, on the contrary the soil was loose and friable and roots were white, vigorous, and healthy to a depth of approximately 10 inches. This deep irrigation apparently helped maintain a more uniform soil moisture and temperature, and an improved capillarity provided roots with needed moisture for extended periods. Initially 20 days elapsed before we returned to the same setting between irrigations, and as the season progressed we were able to extend the interval to 26 days before the turf showed tell-tale signs of wilting.

Since our experiment worked so well



in 1962, we now feel that we have progressed beyond the trial and error method of irrigation at Round Hill. This technique worked very well under our conditions during a year when climate was extremely favorable to cool-season grass growth. Whether this technique will work again this year under different climatic conditions only time will tell. However, I feel it will.

I also feel that more adequate liming in recent years has also had a tremendous influence on the more efficient use of water. If I had the past 40 years to do over again there are two phases of a management program that I would study more thoroughly. I am confident that I would use limestone more generously and I would strongly pursue a program of less frequent but more thorough (deeper) irrigation.



"Molly" Strazza examines soil moisture penetration in a fairway. The soil core removed to a depth of 15 inches indicates moisture present at that depth.

## Water and Turf Diseases

By HOLMAN M. GRIFFIN

Agronomist, USGA Green Section, Southwestern Office

Plant diseases have been a problem to man since the dawn of history, and there has been a constant effort to find methods of alleviating or preventing them. Blight and mildew were known in biblical times, and Aristotle described wheat rust in 350 B. C. During these early times the causes of disease were unknown and accordingly many superstitious explanations were offered. At least one of the explanations was that the diseases were caused by demons or angry gods inflicting punishment on the people. In order to frighten away the demons or appease the gods, complex rituals were performed or prayers were offered. This was somewhat like the witch doctor approach some backward nations still use for curing human disease, and it constitutes the first-known attempts at plant disease control.

The following directions for plant disease control date back to 1790 and are a good example of some of the

earlier experimentations in this field. Take one bushel of fresh cow dung, one-half bushel lime rubbish from old buildings, one-half bushel wood ashes, one-sixteenth bushel pit or river sand. The last three are to be sifted fine before they are mixed. Then work them together with a spade and afterward with a wooden beater until the stuff is very smooth like fine plaster used on ceilings of rooms. The mixture was made to the proper consistency with soapsuds or wine; and after its application to the plant, it was dusted over with dry powder of wood ashes mixed with the sixth part of the same quantity of burnt bones.

Experiments with mixtures such as these were the forerunners of the successful experimentation that has resulted in modern controls for plant diseases. Extensive research has now given us chemical as well as cultural methods for combating turf diseases, but these principles and controls must

be logically and systematically applied to be of value.

Since our discussion is primarily concerned with water's relationship to plant disease, I would like to define the word disease in such a way that it encompasses all detrimental effects of moisture to turf. This is using Webster's definition of disease rather loosely, but in many ways we may think of any condition which impairs health as being a disease.

For years the subject of altering the susceptibility of turfgrass to disease by manipulation of the water and fertility management programs has interested pathologists and management specialists. Today, there are many opinions along these lines but few facts. There is certainly a great void in our knowledge of the relationship of water to plant disease and in most cases we are left to draw our own conclusions.

#### **Water's Influence**

Essentially, there are only three ways in which water can influence disease and affect turf. Our troubles

come from either too much water, not enough water, or impurities in water. Again, this is treating our subject rather generally, but I believe we can give some specific examples which fall into each category.

First, we will consider overwatering as a major cause of unhealthy turf. This practice is found rather frequently on golf courses in spite of all that has been said and written about the subject.

Golfers sometimes get the idea that the more water that is applied to a green, the better it will hold a shot. This is neither good golf nor good greenkeeping. What actually occurs with many soils is that they become harder with the addition of excess water. The combination of water and traffic on the greens causes the soil to puddle on the surface, and there is a lack of oxygen in the root zone for the grass. Under these conditions the turf cover is lost, and the soil is further compacted by the lack of a cushion of turf above it; and it becomes increasingly difficult to hold a shot on the green.

Also, a soggy condition of the turf aids disease development. The fungi which cause disease need abundant moisture for their best growth; and when the soil is kept saturated, they develop readily to cause turf injury. Watering is too often a routine rather than an effort to supply the needs of the grass. By watering on schedule rather than according to need we invite trouble from many sources.

Irrigation is not the only source of too much water, however; and rainfall, high humidity, dew and guttational water are closely related to disease incidence.

Rainfall gathers as many as 5 million organisms per square yard on the way to earth, and the figure for snow is even higher. Disease organisms are carried so well by raindrops and runoff water that the activity of disease can actually be closely correlated with annual rainfall in areas of similar cli-

#### **COMING EVENTS**

**February 25-26**

**Southern Turfgrass Conference**  
Peabody Hotel,  
Memphis, Tennessee

**February 27-28 - March 1**

**Minnesota Educational Conference**  
Lowry Hotel  
St. Paul, Minnesota

**February 27 - March 3**

**Cornell Turfgrass Conference**  
Cornell University  
Ithaca, New York

**March 4-5-6**

**Midwest Regional Turf Conference**  
Purdue University  
Lafayette, Indiana

**March 7-8**

**University of Massachusetts Turfgrass Conf.**  
University of Massachusetts  
Amherst, Massachusetts

**March 12-13-14**

**Annual Turfgrass Short Course**  
Iowa State University  
Ames, Iowa

**March 21-22**

**Michigan State Turfgrass Conf.**  
Michigan State University  
East Lansing, Mich.

**March 27-29**

**Ontario Turfgrass Conference**  
Ontario Agricultural College  
Ontario, Canada

mate. The higher the rainfall, the greater the disease activity.

### Rain Often Aids Disease

Often the action of raindrops is the means by which certain spores are liberated. Rain in large drops or driven by wind breaks the disease spores from their stalks or from within an enclosed layer and sets them free.

Relative humidity acts in two ways. During periods of high relative humidity most disease organisms reproduce freely and are able to infect healthy plant tissue. On the other hand, low relative humidity can cause partial wilting of the host tissue in dry air and apparently aids the penetration of certain fungi.

Even though the air around us feels dry, the microclimate surrounding the grass may contain ideal moisture conditions for disease germination. This is sometimes accounted for by dew or the guttation from grass leaves. Many diseases also tend to be autocatalytic in that a certain amount of moisture is produced by the decomposition of the spent disease organisms to provide moisture for new ones.

Watering in the early morning is considered best for dispersing dews and allowing the grass leaves to remain dry as much as possible. Threshing the greens with a limber bamboo pole or dragging a clean water hose across the green surface also helps to disperse dew and moisture otherwise collected on grass leaves.

Another common malady of grass caused by excess water is scald. This condition may or may not be accompanied by disease organisms, and its real cause is somewhat questionable. All too often the term scald is used as a "catch all" classification to describe any unidentified turf injury. It is doubtful that grass is ever actually scalded by water that has been overheated by the sun's rays; but we do know that when oxygen is excluded from the soil by overwatering, plants take on a scalded appearance. Low

oxygen supply leads to impermeability of the cell walls in roots and they are no longer able to absorb water in proper quantities. This leads to a moisture deficit in the plant and causes the plant to wilt even though it may be in water.

Because most people fail to associate a wet soil with a lack of moisture in the plant, the condition is not recognized as wilt and is called scald.

A lack of water may be associated with turf disease in that it weakens the plant making it all the more susceptible to disease organisms. A good example of this is the *Curvularia* sp. organisms which usually attack only plants that have first been weakened by adverse environmental conditions.

Fairy ring is a different type of disease which actually denies moisture to the grass. A very dense mass of fungus filaments called the mycelium are produced in a circular pattern in the soil. Because of this dense mycelium, which acts very much like compressed felt in its ability to absorb moisture, the soil cannot be properly wetted by normal watering; and the turf dies or is weakened from lack of moisture.

Mat and thatch also deny moisture to the turfgrass and provide an excellent place for disease to breed. The dead and decaying organic matter in thatch or mat is actually what most fungi pathogenic to turf feed on. Water and air are restricted from the grass roots by an impervious layer of undecomposed organic material, and we have almost ideal conditions for weak grass and strong fungi.

### Watch For Warnings

The last and most inexcusable reason for lack of moisture is the failure to apply it when it is needed. The warning signals are always there for those who take time to notice. The grass turns a blue-gray or slate color and begins to footprint. In many locations during the summer a period of 15 to 20 minutes is the difference between live and dead bentgrass.

By all means we should try to learn and use good watering habits. In this way we will be helping to overcome disease by maintaining vigorous turf.

The third way in which water affects turf is through impurities it carries. Water with an extremely high or low pH can have an effect on bacterial action in the soil, and any detrimental effects should be alleviated by correcting the pH of the soil.

Other impurities in water which may cause trouble are certain salts which are injurious to turf. When water containing a high quantity of injurious salts is used, management of both soil and water is essential. Good drainage is necessary to wash the accumulating salts downward and out of the root zone, and it is therefore necessary to have a permeable soil with a high infiltration rate. Quite often, some relief may be obtained by the use of soil conditioners such as gypsum which replaces the undesirable salt in the soil and allows it to be leached out.

Last of all, the amount of water used as a solvent or carrier for fungicide in a spray solution affects turf. When

used in the proper amounts with the proper pressure, it is effective. If large quantities are used, the chemical may become too dilute and have little, if any, effect. If too little water is used, the resulting burn may sometimes be worse than the disease.

Now, let us look to the future. It is possible that someday our whole concept of water may be changed, and we will be better able to use it and understand it. Only in the last three years was powdered water developed by the National Cash Register Company and put to use industrially. Someday this may be the answer to golf course watering problems whereby exact quantities can be applied with little waste. This may seem ridiculous now, but so did a lot of other things which we now accept as commonplace in our present Space Age.

There is a lot to be learned about water and its relationship to our environment. We know the basic composition of water, but we have not yet measured all its properties. It is so essential we cannot live without water, but we can live better with it if we learn more about it.

## *Role of Proper Management Practices in Weed Control*

By DR. MARVIN H. FERGUSON

Mid-Continent Director, National Research Coordinator, USGA Green Section

Management seeks to eliminate the causes of troubles before the troubles arise. It makes use of all the available tools for the manipulation of the environment of turfgrasses so that these desirable plants are favored and the undesirables (weeds) are hampered. To control weeds one must get rid of basic problems.

It may also be said that the manipulation of practices such as moving, fertilizing, and watering are of themselves inadequate to control weeds. The successful turf grower makes use of the

new technology which encompasses pre-emergence chemical controls, post-emergence chemical controls, and mechanical methods.

If we recall the era prior to World War II when weed control technology was very limited we may remember that dandelion seed heads sometimes obscured golf balls in fairways and that crabgrass was not nearly so bad a pest because it provided playable turf despite its undesirable characteristics. It may provide some small comfort to us to recognize that our most serious



weed pests in 1962 were practically unnoticed in 1942 because there were so many more serious pests that are now quite easily controlled. It is a measure of our progress in the weed control battle. The situation may be likened to a man with a pebble in his shoe. He never will notice the grains of sand until he removes the pebble. Then the grains of sand can become extremely annoying.

Weed control efforts may be characterized in three categories. These are isolation, protection (prevention), and eradication.

**Isolation** is practiced by establishing turf in clean ground where there are likely to be few weed seeds, and by using sterilized soil in topdressing. Our seed laws have provisions which prevent the spread of noxious weeds to uninfested areas through seed contamination. Isolation is an important part of a weed control effort, but because our practices are imperfect and because outside agencies such as wind, water, and animals transport seeds, attempts at complete isolation almost always fail.

**Protection**, or prevention, encompasses the use of pre-emergence materials which halt germination or development of the weed. It also includes environmental manipulation. Irrigation practices, fertilization, mowing techniques, cultivation practices, the use of insecticides and fungicides are matters that affect the well-being of the turf and its resistance to weed invasion.

**Eradication** may be accomplished by hand weeding, by mowing (in some cases) or by the use of post-emergence chemical controls. This is the most spectacular phase of weed control and it is extremely important. However, when one has completed a program of eradication, he must then resort to attempts at isolation, and eventually to prevention. The capable turf grower must use all the tools and techniques available to him.

It is important for the turf grower to know the weeds he deals with. If one knows the characteristics of growth and the life cycle of a weed, he can determine where and when the weed is vulnerable. He must also know his grass. He then is in a position to relate his management practices to the strength of his turf and the weaknesses of the weed.

### **Timing is Important**

Timing of operation often is extremely important. An application of fertilizer and water on Kentucky bluegrass at a period when it is heavily infected with leafspot and when crabgrass is germinating will almost certainly result in a turf that appears to be 100 percent crabgrass. But an application of fertilizer and water in the fall when crabgrass is dying out and bluegrass is entering a period favorable for growth will do much to increase the density and vigor of the bluegrass in the following year. There are many other examples which may be less obvious but which are, nevertheless, important.

Enumeration of the management practices conducive to weed control is difficult because the different methods employed and the timing of practices may sometimes be such that they favor weeds rather than turf. There are, however, a few things that seem almost universally applicable. We should eliminate, or at least modify, excessive thatch, excessive compaction, and excessive shade. We should control insects and diseases. We should provide adequate drainage, adequate fertility, and adequate moisture.

The final admonition is to **learn**. The successful turf grower must learn as much as possible about the plants he is dealing with, about new management techniques, and about new chemicals. He should do some experimenting with his own equipment on his own turf. With all the new technology, and new materials, one should not allow

himself to forget the old, proven, time-tested methods. We have seen people spray greens with a potentially dangerous herbicide for the purpose of controlling a sparse infestation of weeds that could have been hand-picked

in the time required to prepare the material and the sprayer for the chemical application. Knowledge that is up-to-date and judgment that is down-to-earth are the two keys to proper management and adequate weed control.

## *Fertilizers - Basic Information*

By **DR. MARVIN H. FERGUSON**

Mid-Continent Director, National Research Coordinator, USGA Green Section

The fertilizer user today has more choices than ever before with respect to grade, to physical condition, and to nutrient availability. There are many basic facts that are useful in selecting and applying fertilizer. We shall consider this subject under three headings. They are (1) analysis, (2) physical condition, and (3) nutrient availability.

### ANALYSIS

Fertilizer analysis is usually expressed as 12-6-6, 13-13-13, 0-14-14, etc. These are known as fertilizer grades. The figures refer to the percentages of the nutrient elements, nitrogen (expressed as N), phosphorus (expressed as  $P_2O_5$  equivalent), and potash (expressed as  $K_2O$ ), respectively, contained in the fertilizer. Fertilizer grades which may be marketed are usually fixed by the state regulatory agency, and they may vary from state to state.

Ratio is another term that is used with reference to fertilizer analysis. This is simply an expression of the relative amounts of plant food elements present in fertilizer. Thus, a fertilizer of the 12-6-6 grade is said to be a 2-1-1 ratio because it has two parts of N to one part of  $P_2O_5$  and one part  $K_2O$ . Likewise a 13-13-13 grade is a 1-1-1 ratio, because the nutrients are contained in equal quantities.

The nutrient elements which are considered in expressing the analysis of a fertilizer are certainly not the only ones which are important to plant growth. There are 15 elements that

are essential to plant growth, and there is considerable evidence to cause us to suspect the essentiality of at least three more. Some of these essential elements are contained in most mixed fertilizers but are not shown in analysis. Examples are sulfur, which is contained in sulfate of ammonia and superphosphate, calcium which is contained in superphosphate, etc.

The analysis of fertilizer is limited to some degree because of the fact that all the fertilizer elements occur in compounds. They are useless as fertilizers in the elemental state. Furthermore, most fertilizers have conditioning agents added for the purpose of providing the proper physical qualities, to keep fertilizer from caking and to promote free-flowing capabilities in the spreader.

Let us digress from the subject momentarily to consider the figuring of application rates. How much 0-14-14 do you apply if you want to apply 70 pounds per acre each of phosphorus and potash? How much 12-6-6 is required to provide 2 pounds of nitrogen per 1000 square feet to a putting green? Both questions can be answered by use of the same formula.

$$\frac{\text{Rate} \times 100}{\%}$$

Substituting, the rate in the first case is 70 pounds and the percentage of the elements is 14. Therefore,

$$\frac{70 \times 100}{14} = 500$$

500 pounds of 0-14-14 per acre will

supply 70 pounds each of  $P_2O_5$  and  $K_2O$ .

In the other problem, the percentage is 12, and the rate is 2 pounds per 1000 square feet. Applying the same formula,

$$\frac{2 \times 100}{12} = \frac{200}{12} = 16\frac{2}{3} \text{ lbs. of fertilizer}$$

required per 1000 square feet to supply 2 pounds of N. the same formula will show that the 12-6-6 will supply 1 pound of  $P_2O_5$  and 1 pound of  $K_2O$  per 1000 square feet.

#### PHYSICAL CONDITION

A fertilizer adaptable to your method of application is quite important to the efficiency of its use. For instance, if you depend upon a broadcast type spreader with a rotating pan, you will be much happier with a pelleted type material. On the other hand, if your spreader is the conventional drill type, the powdered or crystalline types of fertilizer material may fit your needs.

The fertilizer user is quite fortunate in having a wide choice of materials and methods of application. The three major classes of fertilizer types with

respect to physical characteristics are liquids, powdered or crystalline materials, and granular or pelleted materials. All have certain advantages and disadvantages and the choice would depend upon the application equipment available, the effects you wish to achieve and, of course, the price.

Any soluble fertilizer material may be used as a liquid upon being dissolved in water. Most liquid materials which contain all the three major fertilizer elements are based upon ammoniated phosphoric acid. Most nitrogen materials are readily soluble as are most salts of potassium. Advantages of liquids are that they may be mixed in the spray tank with fungicides or other materials to be sprayed. In some cases, liquid fertilizers may be injected into the irrigation system and applied with the regular watering of turfed areas. Disadvantages are chiefly connected with problems of shipping, storing, and corrosion of metal containers or application equipment.

The powdered or crystalline materials such as sulfate of ammonia, ordinary superphosphate, etc. are perhaps the most common and the cheapest sources of plant nutrients. These materials have the advantages of familiarity and low cost. Disadvantages are associated with tendencies toward bridging, dustiness, and sometimes caking. The curing processing involved and the conditioning of materials used are extremely important to the physical qualities of these traditional fertilizer products.

Granulated or pelleted fertilizers are becoming more common. The manufacturing steps involved in granulation or pelleting will sometimes add to the costs of these products, but they have other advantages which may offset the cost. Pelleted materials may be used in broadcast spreaders, dustiness is reduced, and the free-flowing characteristics are desirable. There is no problem of caking or bridging and wind does not seriously effect distribution.

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#### MID-CONTINENT REGION

- Ky. Hopkinsville Golf and Country Club  
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Colo. North Glenn Golf Club, Denver  
Kans. Rolling Hills Country Club, Wichita  
N. M. Silver Golf Club, Silver City  
Lions Municipal Golf Course and Golf  
Course #3, Austin  
Texas

#### WESTERN REGION

- Ore. Illahe Hills Country Club, Salem

## AVAILABILITY OF NUTRIENTS

Whether or not nutrients are quickly or slowly available is often quite important in the choice of fertilizers. There are sometimes advantages in favor of either quick or delayed availability.

Nitrogen is the element with which turf growers are most frequently concerned with respect to availability. Nitrogen may be characterized as the growth element insofar as grass is concerned. Since it controls the rate of growth and the softness or succulence of turf, the grower must gauge the size of his nitrogen applications by the speed with which it becomes available to the plant.

Nitrogen is not "fixed" by the soil except for that part which may be utilized by microorganisms and temporarily tied up. Therefore, the form in which nitrogen is applied affects its availability to the plant.

Most of the inorganic materials are soluble and therefore are quickly available. Nitrogen is taken into the plant either as nitrate or ammonia. Therefore, materials such as ammonium sulfate, ammonium nitrate, sodium nitrate, etc. are immediately usable.

Organic forms of nitrogen are more slowly available. They must undergo some chemical changes in order that the nitrogen may be converted to a form usable by the plant. Examples of organic nitrogen carriers are processed sewerage sludge, the oil seed meals, and tankage. Manures used in composts and applied as topdressing are another organic source of nitrogen.

In recent years "controlled release" products have been developed. The urea-formaldehyde products have been widely tested and are in use on some golf courses. With these materials it is possible to provide for prolonged release of nitrogen following one large application.

A more recent type of material in the developmental stage involves the

use of plastic coatings of varying thicknesses over pellets of inorganic nitrogen compounds. Theoretically it should be possible to blend batches of materials with differing coating thicknesses in such a way as to provide for controlled release of nitrogen (or other soluble elements) over a long period.

Phosphorus may be fixed by reacting with other soil materials. Therefore, the application of soluble compounds will not necessarily guarantee that the phosphorus will remain in a form available to the plant. Ammonium phosphates are soluble. Superphosphate and treble superphosphate contain some phosphorus in a form which is available and some which may be relatively slowly available. Rock phosphate is a slowly soluble form of phosphate.

Most potassium salts are soluble, though some potassium enters into the base exchange phenomena of the soil and may be fixed. Usually there is a good balance between the available and fixed potassium, if any ample quantity exists in the soil and if the soil has a high base exchange capacity. Fritted potassium is a slowly available form and is sometimes useful under artificial soil conditions.

Fertilizer is one of the golf course superintendent's most important tools in turf management. He should give a great deal of thought to the choice of materials. He must secure a fertilizer which has an analysis suited to the needs of his turf and apply it in the correct quantity. He must choose a material with a physical condition which is correct for his application equipment. He must fit rates of application to the nutrient availability as well as the analysis and the needs of his plant.

## Don't Build Trouble

In the construction of new greens or the rebuilding of old greens, provide for adequate surface and subsurface drainage. Well drained greens are damaged considerably less than poorly drained ones when covered with ice.



# ANNUAL INDEX TO USGA JOURNAL AND TURF MANAGEMENT

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# IT'S YOUR HONOR

## NEW AMATEUR RULES CRITICIZED

### TO THE USGA:

I would like to refer to the recent change you made regarding the violation of the amateur code effective January 1, 1963. This new rule which makes it possible for an amateur golfer to repair and sell golf merchandise in a pro shop is a mockery to amateur golf.

You have based your rule change on an old rule that is a poor premise itself. This old rule, which declares a greenskeeper an amateur, is based on the theory that a greenskeeper has no more advantage in amateur golf than does a person working outside of golf. This is ridiculous!

It would have been much more wise (and fair) to alter your rule on the amateur status of a greenskeeper rather than base a new rule on an old premise that should have been changed in the first place.

Also, with your new rule, you imply a person working in a pro shop has no great advantage in amateur golf. Surely no one on your Executive Committee, which is composed of men so learned in the game of golf, is so naive to believe this.

Another point: Do you believe men all over the country are going to work in pro shops selling golf merchandise and assuming the full duties of a club professional with the exception of taking compensation for golf lessons?

I sincerely hope the Executive Committee reconsiders the steps they have taken toward the amateur golf violation rules. Beginning January 1, there will be little distinguishing difference between a professional on the tour and a "pro-shop" amateur. I hope the USGA will return "Amateur" golf to the state it has so long enjoyed, that is, a game for *Amateurs*.

DONALD J. VAN PELT  
El Paso Country Club  
El Paso, Texas

### TO THE USGA:

I was surprised and saddened by the new Amateur Rules on the caddies, et al . . .

Certainly caddies would rather play golf then get an education or go into business, so they will play golf to the assassination of their lives. And according to my way of thinking, I don't know how a fellow in business working downtown could compete with the caddie who spends long hours on the golf course. I am very much afraid of this rule. I don't believe in it . . .

The course of Amateur Golf is downward and I fear its consequences. Letting people be amateurs who spend their whole days around golf courses, their whole minds thinking and planning and studying golf, will consequently scare the business man amateur; and all of the amateurs working in legitimate business will realize this new rule threatens a deluge.

CHARLES EVANS, JR.  
Chicago, Ill.



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## USGA HEADQUARTERS

"Golf House", 40 East 38th Street, New York 16, N. Y.

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## USGA GREEN SECTION

### EASTERN REGION

**Northeastern Office:** 814 Raritan Ave., Highland Park, N. J.  
Alexander M. Radko, Director, Eastern Region  
Raymond E. Harman, Northeastern Agronomist  
Lee Record, Northeastern Agronomist  
**Southeastern Office:** P. O. Box 4213, Campus Station, Athens, Ga.  
James B. Moncrief, Southeastern Agronomist

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**Southwestern Office:** Texas A. and M. College, College Station, Texas  
Dr. Marvin H. Ferguson, Director, Mid-Continent Region and National  
Research Coordinator  
W. Wayne Allen, Southwestern Agronomist  
Holman M. Griffin, Southwestern Agronomist  
**Mid-Western Office:** Room 241, LaSalle Hotel, Chicago 2, Ill.  
James L. Holmes, Mid-Western Agronomist

### WESTERN REGION

**Western Office:** P. O. Box 567, Garden Grove, Calif.  
William H. Bengeyfield, Director, Western Region