

# Better Turf Through Research

*Trees may form a textured background behind greens or along the sides of fairways that not only create an atmosphere of natural beauty but also decrease awareness of others nearby.*

**R**esearch is an investment in a better future. And it costs money.

In the United States today, approximately 3% of our Gross National Product is devoted to research in all forms. If just 1% of the nation's total annual golf course maintenance bill went to research, we would have over \$1 million for turfgrass studies. Think of it; \$1 million annually for turfgrass research! In reality, less than one-tenth of this is being spent.

There is now a need—a serious need—for new research in this field. Recreation has become an essential part of modern living. Golf is a leader in participant sports and golf is played on grass. For this reason, the Green Section of the USGA has become a leader in turfgrass research since

1920. The need now is to move on to the problems of today: to solve them and to assure better golfing turf for tomorrow.

To date our Research and Education Fund has operated on extremely limited funds, yet a great deal has been accomplished because of our coordinated program and a careful, studied project selection. A great deal more could be accomplished if more funds were available. Research costs money and this is an appeal—a reasoned appeal—for your help and the help of all those interested in turfgrasses, in golf, and in the future.

Within the last five years our Research and Education Fund furnished support of projects in the following amounts:

<i>Institution</i>	<i>Amount Contributed</i>
University of California—Davis	\$ 2,000.00
University of California—Riverside	5,000.00
Georgia Coastal Plain Experiment Station, Tifton	7,500.00
Kansas State University	5,000.00
Michigan State University	18,000.00
Oklahoma State University	5,000.00
Pennsylvania State University	4,000.00
Purdue University	1,000.00
University of Rhode Island	6,750.00
Rutgers University	12,000.00
Texas A&M University	10,000.00
Virginia Polytechnic Institute	2,000.00

In the past, the work has been supported by allocation of a portion of membership dues in the USGA, by part of the proceeds from National Golf Day, by donations from the Masters Tournament and charitable Pro-Am events, by the New England Golf Association, and from individual donations. As contributions have increased, grants for further research have been liberalized, but there still is a critical need for greater income to support more extensive investigation into these projects and the many other problems encountered in improving golf course turf.

In 1970, because of the work and interest of the USGA Executive Committee, \$32,000 is earmarked for research. This is approximately 40% more than the total allocated in previous years and this is a step in the right direction. Funds to this date in 1970 were raised from these few sources (figures are approximate):

National Golf Fund	\$15,400.00
*Augusta (Ga.) National Golf Club	2,500.00
New England Golf Association Individuals	1,350.00 4,150.00
USGA (allocated from membership dues)	20,000.00
*1969 Contribution	

Golf owes a lot to organizations and individuals who have faithfully contributed in the past, yet this pitifully small list shows one fact to be clearly evident: that a nationally coordinated fund raising effort is needed, and needed now if golf is to progress with the times. To paraphrase a Churchillism: "Never in the history of golf has so much been owed by so many to so few."

### Problems to Solve

- Better grasses for fairways—breeding of dwarf types for play by the Rules of Golf or so-called summer rules play. Our avowed aim is the elimination of "winter rules" forever, and to breed types that are more winter hardy than grasses presently used.
  - Research into water management, plant-soil relationships.
- Superior grasses for putting greens. Perfect surfaces; less grain.
  - Safer turfgrass pesticides for a cleaner environment.
- Research into the microenvironment.
  - Studies in sand uniformity for bunkers.

- Traffic studies—vehicular and foot traffic problems.
  - Stronger tee grasses—strains that make quicker recovery.
- Maintenance and management aids—labor-saving equipment—more efficient machines—new techniques, new ideas in machinery.
  - Controls for root-rotting fungi.
- The value of a golf course to the environment.
  - Trees—for strategy and aesthetics.
- Keeping sand cleaner and whiter in bunkers.

### Problems Now Being Researched

- Basic studies of *Poa annua* designed to provide insight into habits of this plant and better understanding of problems associated with its growth.
  - Degradation of thatch and mat. Play will be greatly enhanced when thatch and mat are controlled.
- Breeding of grasses for improved fairway types of Kentucky bluegrass, bentgrass and bermudagrass.
  - Spring Dead Spot.
- Techniques to insure better success with renovation of greens, tees and fairways.
  - Nutritional requirements of turf-grasses.
- Continued studies of weed, insect and disease control . . . better controls of present problems and a search to solve new ones as they arise.

### Some Major Accomplishments

- Developed a method of putting green construction and physical soil analysis that has world-wide application. Produced a motion picture in color demonstrating the application of this construction method. The movie is available for showing to groups.
  - Initiated studies and discovered safe materials for control of devastating diseases of putting green grasses. Although discovered in the 1920s, they are still being used today.



*The cool refreshing environment of the clubhouse is predicted as the golfer approaches through this inviting area of shade.*

- Selected and developed improved grasses—the C strains of bentgrass, Merion bluegrass, Meyer zoysia, several bermudagrasses.
    - Set guidelines for today's maintenance and management of golf course turfgrasses.
  - Researched 2, 4-D for large-scale golf course use. (Remember when golf courses were solid weeds?)
    - Supported work that brought many improved bermudagrasses to golf courses in the South and throughout the world where only southern grasses can be grown.
  - Soil compaction and techniques to minimize it.
    - Researched effective controls for the major golf course weeds and insects.
  - Traffic studies resulted in the modification of golf spikes and shoes.
    - Researched nutritional requirements of golf turfgrasses.
  - Published and made available results of research to everyone interested in golf course management. Published the book *Turf Management*, first of its kind and a complete and comprehensive book on the maintenance and management of golf course turfgrasses.
- The Green Section of the United States Golf Association is a scientific agency, established in 1920, whose sole mission is to assist in problems of golf course upkeep. The agency through which the USGA raises funds for worthwhile projects is the U.S.G.A. Green Section Research and Education Fund, Inc.
- This is how it functions:
- (1) Needs are recognized by Green Section staff members as they visit subscribing USGA



members throughout the nation. Turf management problems are discussed with golf course superintendents and club officials.

(2) Available research funds are then allocated to state agricultural experiment stations and colleges for specific studies on golf course related problems. Studies are performed by trained scientists and researchers expert in the particular area to be studied.

(3) Research results are evaluated under playing conditions by the Green Section staff.

(4) The total program is planned and coordinated by the Green Section staff on a national scale. It is the only agency so equipped. Thus funds are placed more efficiently, and duplication of effort is avoided. This is an important point. Duplication of effort is research money wasted. Research results then are documented, published and readily available to every-

one interested in golf course maintenance and management.

(5) Funds raised through the U.S.G.A. Green Section Research and Education Fund, Inc., benefit every club and every golfer.

Contributions to the U.S.G.A. Green Section Research and Education Fund, Inc., are tax deductible in accordance with the Internal Revenue Code, section 501 C(3). Every dollar received is spent for research, *no contribution money is used for USGA administrative purposes*. Contributions in any amount are welcome. Contribute with confidence that your money will insure better turfgrasses, better maintenance and management practices, better playing conditions, and better golf courses for the future.

Make checks payable to the U.S.G.A. Green Section Research and Education Fund, Inc., and send them to the United States Golf Association, 40 East 38th Street, New York, New York 10016.

U.S.G.A. Green Section  
Research and Education Fund, Inc.  
"Golf House"  
40 East 38th Street  
New York, New York 10016

Gentlemen:

I am interested in contributing to the U.S.G.A. Green Section Research and Education Fund, Inc.

- My contribution is enclosed.
- I would like more information. Please have one of your committee members contact me.

Signed \_\_\_\_\_

Address \_\_\_\_\_

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