Judith Gockel: Green thumb runs in family

BY VERN PUTNEY

Judith F. Gockel is "The First Lady of Soil — and Water."

Recognized as a leading authority in these complex fields, the Houston, Texas, area resident's background is all green.

Her father, Marvin H. Ferguson, PhD, began his career working for the U.S. Department of Agriculture in Arlington, Va., on the turf plots where the Pentagon now stands.

When the plots were moved to Beltsville, Md., he selected some successful strains of Zoysiagrass to move to the new facility. Judy's first sunbaths were on those plots. Most of the current strains of Zoysia were a product of his selection process.

Upon Navy discharge after World War II, Ferguson went to work for the United States Golf Association in Beltsville. Ferguson moved his family to Texas in 1952, taught at Texas A&M for a year, then rejoined the USGA Green Section as research and mid-continent director.

He maintained the Green Section office on campus, and in the mid-1950s began the research that led to the USGA Green Section-recommended specifications late in the decade.

The method involved using natural physical laws to set up an optimum turfgrass environment, permitting appropriate amounts of air, water and nutrients to be made available to the plant.

This development has in part made possible the modern high-traffic, intensively maintained golf facility. Native soil structures simply can not take the compaction induced by human and mechanical traffic without smothering or drowning.

Part-time to full-time

In 1963, Dr. Ferguson and Dr. Morris Bloodworth established a small private laboratory to test for the specific characteristics desired in greens mixes. It was a very part-time occupation, and Judith agreed to do the lab work as soil samples were sent in.

In 1968, Ferguson left the Green Section and established a private practice as a golf course architect and agronomic consultant.

The laboratory had grown, and became Judith's full-time occupation.

In the early days, most seedbed mixes (the top layer in a greens structure) contained soil, which were mixed with the other components.

"This was, and is, difficult," said Judith.

As she worked with more and more varied, soil materials, it became obvious that many of the sands tested contained silts and clays, and that it should be possible to make mixes with two components that would blend readily.

Tests bore out the idea, and she began making two-component recommendations. These were the basis for many of the modern recommendations for sand/organic greens.

Judith Gockel

In the mid-1970s, Judith moved away from the area, and had little contact with golf work until her father's death in Januay 1985. At that time, she had agreed to finish up interrupted laboratory work, and moved the testing equipment to her home near Houston.

At the time of her father's death, Judith owned an oil-field service company which marketed several products based on her patents.

(The patents are based on a knowledge of the interaction of particles and fluids, and were an outgrowth of her earlier laboratory work.)

Much to her surprise, she no longer had time to work with the petroleum industry.

The World of Golf had grown up in her absence, and needed the service she could provide. She licensed the oilfield products to others, and came back home to turf.

"I guess those sunbaths paid off," she quips.

Progress made

She notes substantial progress. "Probably the most interesting project was restoration of three more modern greens at The Country Club in Brookline, Mass. (site of the 1988 U.S. Open) to the same soil, structure and feel as the other, 100-year-old greens. We reverse-engineered these holes redesigned by Rees Jones to the precise feel and play characteristics of the others, and the course is now seamless. (A seamless course is one that is the same all over, without the distraction of playing different types of greens.)

"Many older courses have rebuilt holes over the years. They may use other materials or construction methods than were used originally. These greens play differently, at times drawing golfers' objections. Most clubs choose to update all greens to newer standards. However, on a classic course such as Brookline, justly proud membership often wishes to retain the original design.

"We have begun doing soil structures for many types of high-stress turfgrass areas, including football fields, turf horse tracks, soccer facilities, croquet courts etc.

High-stress areas

"Three years ago, we developed a method for forensic testing and problem detection, and a great deal of our current work involves determining how and why problems occur, figuring out how to solve them in place and, in some sad instances, telling the client that there is little choice beyond reconstruction.

"Prior planning, and an understanding of potential problems and stresses, can make the developer's dollar go farther and produce a better sports facility. Failure to plan virtually guarantees full or partial failure."

Gockel cited the current pesticide problem as an interesting example of confusion.

"Healthy turf is less likely to get serious pest infestation than is weak turf," she said. "Healthy turf therefore requires much less pesticide than does weak turf. Healthy turf is the result of good cultural practices. Good cultural practices begin with an appropriate soil structure, chosen for the specific geographical location."

Ferguson descendants do not seem to be able to get away from golf. Judith's brother, Mark, is a landscape architect who also designs golf holes.

Son Ed Hodnett five years ago launched a career as golf course superintendent as an assistant at Hot Springs Village in Hot Springs, Ark. After super stints at Fairfield Bay, Ark., and Mission Country Club in Odessa, Texas, he moved to the Hyatt Waikoloa Beach resort, Hawaii, where he maintains a Robert Trent Jones Jr. course, is supervising construction of a Morrish/Wyscopf design, and is preparing for construction of a third course.

Hodnett's 5-year-old daughter Christina, a natural athlete according to Judith, may well be on the Ladies' Tour by the time she is 20.

That would delight Judith, a frustrated tomboy whose idol was Babe Didriksen. Little League coaches coveted her batting and fielding skills, but it was more than a decade later before girls crashed the all-male lineup.

Gockel is a member of the Golf Course Superintendents Association of America, National Golf Foundation, U.S. Golf, Texas Turfgrass and Southern Turfgrass associations, and has written articles for Golf Course Management, the Green Section Record and the Journal of Petroleum Technology.

Where physical problems do not yield their secrets, she does on-site consultation, "with fascinating results in many cases."

She has spoken at many regional and national conferences, and is developing a one-day seminar to promote the understanding of physical inter-relationships with soil and water in sports turf facilities.