



GUEST COMMENTARY: A GOLF HISTORY LESSON

Golf course maintenance and the first 50 years of American golf

By ROBERT WILLIAMS

To get to the heart of changes in golf course maintenance, we have to go back to the first 50 years in American golf (1895-1945). During that era, courses were characterized by weeds, worm casts, insects, fungi, bacteria, inferior strains of grasses, lack of mechanical equipment to ease the burden of difficult hand labor, and the use of horses for the heaviest work.

In those first 50 years, fairways and greens were covered with dandelions as well as plantain, clover and other troublesome weeds. We hand-weeded greens with knives or used hypodermic needles to inject gasoline into each plant. Worm casts from angleworms were gathered from putting surfaces with special rakes prior to mowing.

Roughs were mowed by horse-drawn sickle bars and fairways with three-gang, horse-drawn mowers (later by 3-, 5- and 7-gang tractor mowers). Greens and tees were mowed by hand-pushed mowers. To say the least, every aspect of maintenance called for hand labor.

The principle fairway fertilizer in the early days was simply horse manure, because it was readily available. Sulfate of ammonia was the usual material for greens and tees.

The problems with weeds, insects and plant disease began to decrease with the development of research and education previously mentioned. The U.S. Department of Agriculture, United States Golf Association (USGA) Green Section, universities, hands-on green superintendents and commercial manufacturers together began to solve the myriad problems impeding golf course conditioning.

The post-World War II years brought miracle chemicals and equipment along with educational programs to get the research information to the ultimate clientele — golf course superintendents. 2,4-D eliminated broadleaf weeds. Chlordane eliminated most of the insects. Mercury and more-advanced chemicals began to give control over the most troublesome diseases.

Self-propelled, mechanical soil aerifiers were being used by 1946, representing a new approach to turfgrass maintenance. In fact, the post-World War II years brought a revolution in all aspects of course maintenance.

Fescues were the primary grasses in U.S. golf's early years. Fescues required little or no irrigation, which was the norm in Scotland and the United States in the early 1900s.

Perhaps the biggest change over the past 100 years has been cutting heights. In the early 1900s, roughs were 6 to 8 inches;

fairways and tees 1 1/4 to 1 1/2 inches; and greens 5/16 to 3/8 inches. Today roughs range from 1 3/4 to 6 inches; fairways and 3/8

to 5/8 inch; tees 3/16 to 3/8 inch; and greens 1/8 to 3/16 inch. So, some of the 300-plus-yard drives of today's Tour pros



can be partially attributed to the close cut and the fast-rolling, improved strains of grass on Tour facilities.

The following have led to the revolution in cutting heights:

- more sophisticated mowing equipment;

- the ability to catch clippings, except in the rough;
- the influence of the Stimp meter to measure green speed;
- the televising of The Masters and other professional golfing events;

- the ever-increasing demands of green committees and golfers for faster speeds;

- the increased knowledge

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Bob Williams was among the key members of the Golf Course Superintendents Association of America in the first half of the 20th century and served as the association's president in 1958. He is retired and living in Illinois.

Levans' farewell

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reached the 1st green. It was late in the day, the last group was long gone, teeing off on 6 at this point. But there, standing alone leaning against a lean Carolina pine, was Dr. Joe Duich, turfgrass consultant for Tee-2-Green Corp. and the "grandfather" of the G-2 bentgrass used at Pinehurst No. 2.

I sidled up. "I think they're done for the day, Joe."

"Oh no," he said. "I'm waiting for

Paul Jett's crew to come down to cut to the cups for the first round. You see, this is when the real action starts."

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It's been a blast leading the GCN editorial charge over the past two years. I just want to take this final opportunity to thank Mark Leslie and Pete Blais for their assistance as I got my feet firmly under me.

I don't think there are two other people who know this industry and its players as well as they do. *Golf Course News* has been, and will remain, in good hands.

Williams commentary

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and abilities of superintendents;

- the advent of prescription soil profiles resulting from USGA and university research on greens construction;

- the cooperative efforts by manufacturers to produce and improve chemicals, machinery and processes; and

- perhaps, most importantly, the university researchers who have bred various grasses adaptable for situations in most any part of the country. Joe Duich of Penn State, Glen Barton of the University

of Georgia and Terry Riordan of the University of Nebraska come quickly to mind, along with many others. These men are the real catalysts for better turf for better golf.

Computers have become all-important in course maintenance. The Golf Course Superintendents Association of America tells us 90 percent of superintendents are now computer literate. With the sophistication of computer-operated irrigation systems and the ability to be in direct contact with research bases at universities, it is a prerequisite to know where to find information when needed.

The constant competition between clubs to keep pace with one another has been another major incentive for change. As the number of clubs has grown, so has the competition.

Accompanying this has been a rise in expenses and revenues.

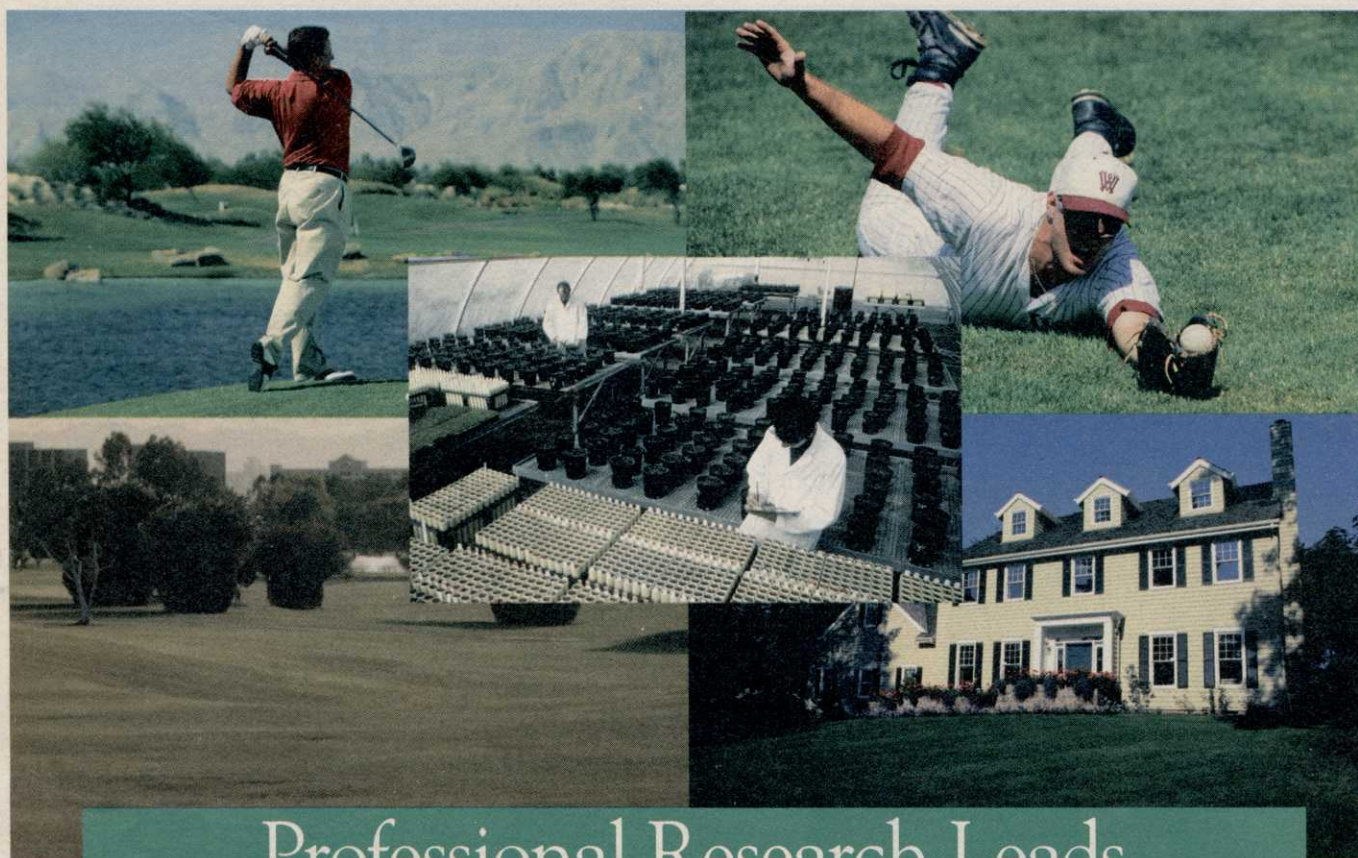
Construction costs have increased dramatically in the past century. A typical 18-hole course that cost \$50,000 to build in the early 1900s, costs several million dollars today.

Annual maintenance costs have skyrocketed from less than \$25,000 pre-World War II to \$1 million and more today.

By the same token, average green fees have leapt from less than \$5 in the 1930s to more than \$30 at just about any daily-fee course today. Golf cars, which didn't exist until the 1950s, add another \$15 to \$25 per person per round.

Wages have held steady at about 70 percent of the course maintenance budget. But the course worker who earned 25 to 50 cents per hour during the Depression makes \$5 to \$12 hourly today, not including health insurance and retirement benefits.

Superintendents have seen their annual salaries rise from \$2,400 to \$3,600 yearly to anywhere from \$50,000 to \$200,000. Superintendents have done their homework and are receiving their just rewards for the value and impact they have on their facilities.



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