

DOC'S DUGOUT - An Inning From Our Past

By Dr. Kent Kurtz - STMA Historian

Remembering Fred - Pioneering Ideas

I returned recently from College Park, Maryland, where I found more treasures from the home of the late Dr. Fred Grau in the way of papers, documents and pictures. The achievements mentioned in these papers have made a great impact on us today in the sports turf industry.

Sterilization of Top-dressing

Marshall Farnham, Philadelphia Country Club conceived the idea of mixing his screened sandy loam topdressing (full of weed seeds) with a complete fertilizer and sewage, moistening the material as it was put in the pile. Within a day or two sufficient heat was generated in the pile so that all seeds, insects and disease organisms were killed. Temperatures in the pile reached 170 degrees, well above pasteurization. This process is used today to sterilize composted products derived from tree bark and solid wastes from the manufacture of paper. This is working with nature.

Matted and Grainy Turf

In 1935, a golf course near Ridgeway, Pennsylvania, had greens that were badly matted and grainy. Since the vertical mower would not be invented for another 11 or 12 years, there was no equipment available to relieve the condition. Fred Grau asked the greenskeeper to get 2 heavy, stiff, stable brooms. They fastened them securely together and arranged the handle so that one man could pull the dual broom across the green. The stiff bristles raised the grain so that the greens mowers could remove a large part of the matted grass. It was crude, but it worked.

Grass and Weed Removal Implements

Joseph Valentine of the Merion Golf Club fastened spring-loaded steel teeth to a frame that was bolted to fairway mower units. The teeth were adjustable and gently lifted the runners of crabgrass, stems of goosegrass and fluffy bentgrass so the mowers would cut them off. It was a pioneering idea but never made it to the manufacturing stage.



Dr. Fred Grau

At the Hershey Country Club, Jim Morrison did something about the crabgrass in his fairways. Coulters were put in place of the teeth in a rotary hoe with the back row out of alignment with the front row. The sharp coulters cut the prostrate stems of all the plants. A large chain link fence drag was pulled over the turf to loosen the cut stems, which were

chopped to bits by the mowers.

Morrison had another pioneering idea. A piece of carpet was attached to the front section of a steel doormat drag used to work in topdressing on greens. Small stones, gravel and debris bounced up and were collected on the carpet. The mat was overturned off the green and the debris was collected.

Jim Hamner at the Memphis Country Club altered a
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cultipacker by replacing the packers with sharpened steel gin saw blades. These successfully cut the stems of Dallisgrass which reel mowers would not cut. It was a great idea and it worked.

Grau was sitting on his lawn in College Park, Maryland one hot July day with his sharp knife in hand. He idly drew the knife blade across the flat stems of goosegrass plentifully growing in the lawn. By drawing the sharp knife across the lawn in two directions, then rubbing the surface with his hand, the goosegrass plant virtually disappeared, leaving only a stub and a small crown. This discovery was related to the Mascaro brothers with whom Grau was working at the time (West Point Products). Shortly thereafter the verticut was born, utilizing the sharp knife principle applied through spinning knife blades. This pioneering idea has revolutionized turfgrass maintenance.

Cultivating the Soil

Another great idea was that of cultivating the soil under the turf with minimum disturbance to the use of the turf. This pioneering concept had been in the making a long time. It blossomed on Grau's desk at Beltsville, Maryland (USGA, USDA) when Charles Hollowell, county agent in Philadelphia, and the Mascaro brothers (Tom & Tony) from West Point, Pennsylvania, visited him. As he recalled, they had in their minds to build something for turf - perhaps a leaf baler.

However, compacted soil was on Grau's mind,

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Editors Note: In the certification article in the July/August issue of the newsletter, Dale Getz's job titles were omitted. Dale was previously the Athletic Facilities Manager for the University of Notre Dame. He currently serves as Grounds Mgmt. Sales Manager/Commercial Products Division for The Toro Company. I apologize to Dale and to anyone else who may have been inconvenienced by this omission. SW

and, as a result, they went home with some crude sketches of a device to cultivate or aerate soils without destroying the sod. At this meeting the basic design of the first aerifier was hammered out and the Mascaros went back to their shop in West Point and started to build the first machine. Everyone today is aware of the tremendous impact of soil cultivation on turf as most sports turf managers have an aerifier to relieve the compaction on their sports fields.

Dr. Grau was born in Nebraska in 1902 and passed away at College Park, Maryland, in 1990. He was extension agronomist at Penn State from 1935-1945, Director of the USGA Green Section from 1945-1953, consulting agronomist for West Point Products from 1953-1956, agronomist for Nitroform Agricultural Products 1956-1960 and agronomist for Hercules, Inc. until 1965. He was a man of vision and his accomplishments will forever be remembered and appreciated. He was made an Honorary Member of STMA in 1987 along with Tom Mascaro.



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