procedures, I believe I established in my mind some methods that will give me better results from my topdressing program. He said that topdressing must come in contact with the soil, if it does not, we form a pocket that causes a decaying condition which is more harmful than good. Thus I have found a reason why the topdressing must be worked into the grass until it actually contacts the other soils. By working this soil down we also improve the immediate playing condition of the greens, which has been the cause of complaints in the past by our members.

"The subject of 'Water, Weeds and Waste' by Dr. James R. Watson, was very interesting to us here in Southern Calif.

"We realize that by light, frequent watering we create a shallow root system in our turf; one that is easily damaged by traffic and bad weather conditions. Thin turf, therefore, crabgrass, poa annua, and other weeds have a chance to become established and crowd out the existing desirable grasses.

"By infrequent watering and deep penetration we develop a strong root system, one that can resist the increase of undesirable plants. By checking our sprinklers for the amount of water they distribute per hour we can determine the amount of time it takes a given sprinkler to deposit an inch of water on the area that it covers. In Southern California during the summer months with soil conditions similar to Riviera, turf should have an inch of water... which will penetrate approximately one foot per week to develop the desirable turf for golfing on fairways.

"Greens and tees must be watered on a different program to reach the results we desire. I prefer to water my tees and greens fairly heavily one night a week preferably on Sunday night. Play is usually light on Monday. By this heavy watering we encourage a deep root system and by capillary action help to leach away undersirable salts that accumulate in the top few inches of the soil.

"Equipment show and maintenance materials. — We were able to witness and discuss every type of turf maintenance equipment with the owner and manufacturer personally.

"After a thorough discussion with these companies I feel confident that as long as I have been at Riviera, I have recommended the purchase of equipment that is the best that money can buy regardless of type or cost. By close compari-

## HAIL THE HALLS



On the right is D. Lester Hall, noted for his job of selecting and developing U-3 Bermuda. Hall's job with this strain of Bermuda has resulted in supply of highly satisfactory tee grass in northern section of Bermudagrass belt.

At the right is Lester's son Dan, supt. at Peachtree, Atlanta, and a great credit to his father's cheerful, practical training.

Fred Grau took this picture at the Southern turfgrass conference.

son between many types of equipment I am satisfied we have made very few mistakes in our purchases of equipment.

"Personal observation of Miami golf courses: — I had the opportunity of visiting the following clubs: La Gorce, Miami Shores, Indian Creek, Plantation, Riviera of Miami, and Miami CC with Mr. Lawrence, prominent golf architect of Florida and Dr. Hallowell, of Pennsylvania State College.

"Some of their architectural characteristics have advantages over those used here in California, and some of ours seem to be better than what they have.

"Due to their heavy rainfall, (72 in. of rain in 1953), I believe they have better drainage design than we do. All of the greens that I saw on the 7 courses I visited seemed to stress surface drainage in at least 2 directions, with as small an amount of water as possible being deposited on the front of the green. Their soil has very fine drainage qualities, but the surface drainage is what impressed me most.

"Their Bermuda grasses are far superior to any of ours, and I believe the turf on the fairways and tees was superior to what we have.

"I still believe our bent greens on the whole are somewhat better than the Gene Tift and Tifton 57 Bermudas of Florida. The bents of California are of a much