



GRASS ROOTS 3 to 6 feet Deep

By O. J. NOER

Dr. Robert Hagen at Davis, Calif., is intensely interested in grasses for special purpose turf. Some of his turf plots are designed to study water relationships because water is becoming scarce in California and other western states, due to demands of increased population.

Some very interesting observations have been made by Bob on several of the plots of U-3 strain of Bermudagrass and of Merion bluegrass. The soil is a loam of good structure and has a good water-holding capacity. The turf has remained green all summer. Rain stopped in April. Plots were watered only once, and by mistake, when Dr. Hagen was away.

The 6 ft. sampling tube used by Dr. Hagen to measure root depth consists of a metal pipe of one in. inside diameter with a barrel shaped cap on the bottom which has a sharp cutting edge. The driving mechanism is square in shape and is made of cast steel with rods extending from opposite sides. The rods fit inside the sampler tube and serve as guides for driving the sampler into the soil. The soil cores are taken at 6 to 12 in. intervals and can be examined for structure, for moisture, and the presence of grass roots.

The ability of U-3 Bermuda to continue growth and stay green is due to the deep root system. There were roots at the 6 ft. depth. The soil at that depth still had some moisture. Merion bluegrass had roots at a 3 ft. depth, and the soil there showed evidence of moisture.

These plots were most impressive when visited by the writer on October 9, 1952. The grass on both the U-3 and the Merion bluegrass plots was dense and the color was pleasing. It makes one think about watering practices and wonder about the interval between water applications es-

Top: Bob Hagen shows U-3 Bermuda plot at Davis, Calif. to Wm. Daniels of Purdue and C. G. Wilson of USGA Green Section.

Middle: This U-3 Bermuda at Davis, Calif., was watered only once during the season, after rains stopped in April.

Bottom: Across the sign is root of U-3 Bermuda taken from 5 ft. depth at Davis, Calif., plot

