ROOT DEVELOPMENT OF COTTON ON CECIL SANDY LOAM DURING 1926

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Considerable work has been reported from time to time on the root development of most of the major field crops of the United States with the exception of cotton. This omission was recently emphasized upon the publication of Weaver's book on Root Development of Field Crops in which a very thorough treatment of the root systems of the major field crops of the United States, with the exception of cotton, was undertaken.

Very little is known concerning the development of the root system of cotton under varying soil conditions. As early as 1889, Whitney (4) of the South Carolina Experiment Station reported having traced the tap root of a cotton plant in light sandy soil at Columbia, South Carolina, to a depth of 3 feet without coming to the end. However, on a heavy loam he found that the tap roots of cotton grew to a depth of only 9 inches, although the secondary roots penetrated the soil laterally from 30 to 36 inches. Balls (1), working in Egypt under irrigation conditions, was able to trace a cotton root to 7½ feet below the surface. King (2), also working under irrigation condition but in the Southwest, has reported tracing a cotton root to a depth of 10 feet, 8 inches. However, little attention has been focused on the lateral extension of cotton roots.

Weaver (3) has shown that the development of roots of field crops is greatly influenced by such environmental factors as soil type, height of the water table, and especially fertilization. As the cotton