Cotton (Gossypium hirsutum L.) is the most important cash crop of the southern portion of the United States and its value is greatly influenced by the length and grade of staple, that is, its quality. Of these, the length of lint is recognized as the more important character by the cotton trade. The trade has long considered that cotton from different sections of the South varied in quality, and many trade names such as “benders,” “rivers,” and “peelers” are used to designate cotton from certain sections which are supposed to produce cotton of special merit. The lint of the cotton from these sections is longer than that from some others but the cause of this difference is unknown. The determination of the conditions affecting the length of the fibers is of special importance in the eastern portion of the cotton belt because much of the cotton now produced there is short lint while that formerly produced was long lint. There has been very little research in this country dealing with the influence of environment on the length of the fiber. The most notable investigations of this nature have been made by Balls working with Egyptian cotton in Egypt, by Burd working with Sea Island cotton in the West Indies, and by Parsons working with Sea Island cotton in Trinidad.

Balls (1) concluded that any conditions that would produce a

1Reference by number is to “Literature Cited,” p. 24.