THE INFLUENCE OF ANY INTERNAL GENETIC CHANGE IN A STANDARD VARIETY OF COTTON UPON FIBER LENGTH

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COTTON growers sometimes complain about their varieties “running out” after the varieties are planted for several seasons. Observation of seed stocks from “run down” or “run out” varieties has shown that the seed appeared to be mixed with those of other varieties. “Black” or “naked” (fuzzless) seed are usually conspicuous in “run out” varieties, and growers soon notice such seed, since the naked condition, besides being easily seen, is apparently linked with a low lint percentage. Moore and Shanklin found that growers who started with seed of an improved or standard variety could keep it pure for four seasons or longer if proper precautions were taken to prevent cross-pollination by foreign seed stocks in the field or mechanical mixing of planting seed at the gin. They also noted that the fiber length of cotton produced from mixed or “run down” varieties was usually very irregular. Moore and Stutts reported relatively pure seed and favorable spinning results from seed stocks originally derived from a registered variety and grown by careful farmers for three to four years. They noted the poor spinning quality of cotton produced from mixed seed stocks originally derived from a registered variety and grown by careless farmers for three to four years.

The main purpose of the work reported here was to measure the influence of any internal genetic change within a standard variety of cotton upon fiber length where cross-pollination with other varieties was avoided.

MATERIALS AND METHODS

A strain of the Mexican variety of cotton bred at the North Carolina Station

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2Cotton Technologist.


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