INTRODUCTION

In the production of sound seed the cotton plant is very often wasteful. Many of the potential seeds or ovules produced in the cotton blossoms are aborted and result in "motes" instead of sound seed. These motes fail to produce any fibers of commercial value and very probably detract from the productivity of the plant. Apparently a method of preventing this waste in production would be highly desirable and conducive to greater yields of lint. A satisfactory method of avoiding this type of waste will probably come only after more complete knowledge is available of the factors associated with the occurrence of motes. An earlier paper\(^4\) describes the loci in the lock where the motes most frequently occur. The location of the motes suggested some rather interesting hypotheses as to their cause. No doubt a knowledge of the varietal and seasonal variation in the production of motes might develop additional information as to their probable cause as well as help in evolving a method of their elimination.

The object of this second study was to determine the varietal and seasonal variations in the occurrences of motes in the more important commercial varieties of cotton grown in the blackland area of Texas. The percentage of motes of all the varieties grown in the regular cotton variety test at Substation No. 5, Temple, Texas, was determined for the years 1925 and 1926. Sixteen varieties were included in this test which covers the range of varieties ordinarily used by the planters of Texas. The wide range of varieties should facilitate their classification into hereditary groups. Fortunately, the two years included in this study were contrasting as to climatic conditions and furnish data as to the influence of some of the environmental factors on motes.

METHOD USED

For each variety tested, approximately 50 individual stalks were studied each year. The plants were harvested when the cotton was about 75% open and all observations were based on the open boll

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\(^1\)Contribution from the Division of Agronomy, Texas Agricultural Experiment Station. Received for publication January 12, 1929.

\(^2\)Agronomist, Sub-station No. 5, Temple, Texas.


\(^4\)Published April, 1929.