INFLUENCE OF VARIETAL DIFFERENCES ON THE GRADE OF COTTON

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It is the general impression of students of the problem that the grade of lint cotton is determined mainly by the amount of exposure that the open bolls receive in the field and by the care taken in picking and ginning the cotton. There have been indications, however, that certain varieties give a lower grade than others when grown and handled in the same way. Some growers have contended that they get better grades from certain varieties than from others. It is also a talking point with some seed salesmen that their variety or varieties give a better grade of lint cotton than the average.

Since a brief survey of cotton literature showed but little definite data on the effect of variety on grade, a project was started by the Louisiana Experiment Station in 1939 in an effort to obtain more information on the subject.

METHODS USED

The research was divided into two divisions. First, studies in which bale lots of cotton were used and ginned on a modern gin with complete cotton cleaning equipment. Second, studies of small-scale operations in which several varieties grown on small replicated plots were used and ginned on a small saw gin not equipped with cleaners.

The first division of the work was carried on on alluvial or delta land at St. Joseph, La. A 12-acre field was divided into acre plots, four of which were planted in Delfos-531 cotton, four in Stoneville-2B, and four in Delta-pine, these being the three most extensively grown varieties in the state. This provided for a bale of cotton of each variety at each of three or more pickings. One picking was made fairly early in the season, one at midseason, and one late, care being taken to see that the same pickers worked on all varieties and that the varieties were all handled in the same way throughout the entire process of planting, cultivating, picking, and ginning. Ten lint samples of each bale were taken from the pressbox while the bale was being ginned and one was taken from each side of the bale after it came from the pressbox.

The small-scale studies were conducted on terrace land soil at Baton Rouge, La., where rains were frequent during July and August. Eight row plots of each of six prominent varieties grown in the state were used and each plot was replicated three times. Early, midseason, and late pickings were made, and in addition, the early picked plots were repicked at midseason. The same precautions, as mentioned above, were taken in regard to the picking, ginning, etc. These small lots of seed cotton were ginned on an 18-saw gin which had no cleaners. Three lint samples of each plot sample from each picking were taken while the cotton was being ginned.

All lint samples were numbered and submitted to two government licensed...