PERCENTAGE OF LINT IN DISTRIBUTED PLATS OF COTTON VARIETIES

J. R. QUINBY AND J. C. STEPHENS

In a previous paper published in this JOURNAL, the writers show that when 10-pound samples taken from a thoroughly mixed bulk of seed cotton are ginned in a 20-saw experimental gin, the probable error of a single determination is approximately 0.200% of lint. This is equivalent to 2 pounds of lint to the acre if a yield of 1,000 pounds of seed cotton is assumed. It was concluded that one sample will give a sufficiently reliable figure for percentage of lint with which to determine acre yield of lint cotton if the sample is taken from the thoroughly mixed total plat production.

In the 1929 cotton variety test at Chillicothe, a 10-pound sample was ginned from each of four distributed plats of 24 varieties. The percentage of lint of each plat is shown in Table 1. The probable error of a single determination, as computed by Hayes' "deviation from the mean" method, is 0.839% of the mean. Or, assuming 33.3% of lint as a general mean for all varieties, the probable error is 0.279% of lint (33.3% of lint x 0.00839). This is a little higher than the error of 0.200% of lint found when random samples from a mixed bulk of cotton were ginned. The difference of 0.079% of lint, however, is equivalent to only 0.8 pound of lint to the acre if 1,000 pounds again is assumed as the acre yield of seed cotton.

In the previous paper, variation in percentage of lint of successive pickings of a variety was considered. A comparison of Table 2 of that paper and Table 1 given here shows that successive pickings of a variety are much more variable in percentage of lint than are total pickings from distributed plats of the same variety.

Although the yields of the distributed plats of a variety varied considerably (Table 1), percentage of lint was relatively constant from plat to plat. When an experiment is on comparatively uniform land, a percentage of lint figure properly derived from ginning the

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In a previous paper published in this JOURNAL, the writers show that when 10-pound samples taken from a thoroughly mixed bulk of seed cotton are ginned in a 20-saw experimental gin, the probable error of a single determination is approximately 0.200% of lint. This is equivalent to 2 pounds of lint to the acre if a yield of 1,000 pounds of seed cotton is assumed. It was concluded that one sample will give a sufficiently reliable figure for percentage of lint with which to determine acre yield of lint cotton if the sample is taken from the thoroughly mixed total plat production.

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