The qualities of cotton which affect its selling price and spinning value have received much attention from agronomists and economists during recent years. Little work, however, has been done on cotton varietal characters, other than yield, which affect cost of production. According to figures compiled from statistics published by the U. S. Dept. of Agriculture (2), the cost of harvesting or picking and marketing cotton has been about one-fifth of the total cost of growing and marketing the crop in this country during the past 3 years. This harvesting and marketing cost (ginning not included) is the largest cost item in cotton production, and practically all of it is for labor used in hand-picking the seed cotton. The hand-picking factor is not only very important in the unit cost of production, but it also determines the amount a worker can produce, as harvesting is generally the limiting factor in individual output.

Cotton growers believe that cotton can be produced at a lower cost by the use of certain large-boll varieties, the seed cotton of which can be easily and quickly picked from the open burs, than by the use of small-boll and other varieties which require more time to pick. Even when the harvesting is done by hired help for a stipulated amount per pound of seed cotton, picking quality, or the amount a worker can pick in a certain time, is important to the owner of the crop as it is sometimes difficult to get certain varieties picked because of the small amount a worker can harvest in a day.

According to Watkins (3), the introduction into Mississippi during the early part of the 19th century of the large-boll Mexican variety of cotton was considered second in importance to the invention of the saw gin. Prior to that time only small-boll varieties were grown and the average day's picking was only 75 to 100 pounds of seed cotton, while a picker could harvest 150 or more pounds of seed cotton from the Mexican variety in a day.

During recent years, cotton breeders have developed a number of rather small-boll, early, and high-yielding varieties which have replaced many of the easy-picking, large-boll kinds grown before the advent of the cotton boll weevil (Anthonomus grandis). This study was made to measure the picking qualities of 16 widely grown cotton varieties and to find the relationships between the time required to pick and the cost of picking the cotton and the length of lint, lint percentage, size of boll, and other fruiting characters of the varieties. The application of the results of this study to the yields and money values of the cotton varieties in this experiment will be presented in a later paper.

Workers (5) at the Cotton Branch Experiment Station at Mari-