With an increasing knowledge of heredity, different systems of corn improvement have been proposed from time to time. The possibilities of progress under these methods has been the subject of experimentation, and it is the object of this paper to consider the results of these experiments in order to fix the present status of corn breeding. For convenience, methods based on self-fertilization will be considered under pure-line breeding, reserving other sections for methods utilizing open-fertilized stocks.

Qualitative improvement of corn without reference to the effect on yield is too well understood to warrant more than mention. Such characters as height of plant or ear, angle of ear, number of suckers or ears per plant, type of ear, and composition of grain have been altered almost at will. Mass selection, pedigree selection, and pure-line methods, alone or in connection with hybridization, have been used to secure such modifications. However, the main object of corn breeding is to increase production, and improvement, therefore, will be construed to refer to increase in yield.

Mass selection,

Because of the large size of the seed units, the ears, a certain