THE USE OF A SELECTION COEFFICIENT.  

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INTRODUCTION.

In connection with the conduct of some corn-breeding work, the writer has found a "selection coefficient" to be of considerable use in helping to make selections. A report of the use and application of this coefficient may perhaps be of service to others engaged in similar work.

PURPOSE OF THE SELECTION.

The selection was begun for the purpose of producing strains of dent corn better adapted to New York conditions. As the number of silos increased there was an increased demand for dent corns. Seed of these for the most part was obtained from the Central States, where the season is more suitable for corn growing. As a result of this practice, much of the dent corn produced in New York did not reach a sufficiently advanced stage of maturity, even for the best ensilage purposes.

The question of maturity was of prime importance. It was realized, however, that if maturity alone was considered it could be attained, of course, but probably at the expense of yield, which was also important. It was desirable to consider both of these qualities in conducting the selection work.

METHOD OF DETERMINING THE COEFFICIENT.

An adaptation of the individual ear-to-row method was followed. It is not the purpose here to describe the details, further than to say that 100 ears were chosen for the beginning and that each year of the experiment each ear in the plat was replicated at least once. The plat furnishing the material for the basis of this report was located in Saratoga Co., N. Y. The elevation at this place is 400 feet.

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2 This work was begun by Dr. H. J. Webber in 1908 and conducted by him until 1912. Since that time it has been in charge of the writer. Credit is due to Dr. H. H. Love for first suggesting the use of this coefficient.
3 This work was done in cooperation with Mr. G. R. Schauber, Ballston Lake, N. Y., to whom much credit is due for the successful conduct of the experiment.