2. THE RELATION OF INHERITANCE STUDIES TO
CORN IMPROVEMENT

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Many of us still hold, at least in our subconscious minds, a subtle
distinction between research in "pure" and "applied" science, al-
though the opposite view has frequently been championed by men
of note. A distinction may be made, to be sure, between investiga-
tions which are pursued with no objective other than to understand
the workings of natural phenomena or to systematize knowledge in
some chosen field, and those which are instigated to solve some
urgent practical problem. It is a curious commentary of science
that knowledge gained for the fun of untangling one of Nature's
puzzles frequently has made possible applications of the greatest
economic importance many years later. Conversely, truths of
profound scientific importance have been uncovered in the pursuit
of the most utilitarian objectives when scientific methods have been
employed. The history of most branches of science shows that they
progress from the stage of empiricism to that of inductive reasoning
as more and more facts are accumulated and classified.

Corn improvement in the past has been carried on largely by
empirical methods but during recent years has made notable advance-
ment in method with much promise for the future. At the same time
a considerable fund of knowledge concerning the inheritance of cer-
tain qualitative characters has been accumulated and generalizations
have been made so that the hereditary behavior of these characters
under any given conditions can be predicted with assurance. It would
seem that the time is at hand when advantage should be taken of
these generalizations, and the genetic method be applied to the
solution of the complex problems of inheritance of function, to the
end that corn improvement be placed on a more scientific basis.

The maize plant affords unusually favorable material for breeding
investigations and the opportunities it offers have been exploited by
many workers. It can be grown under a wide range of conditions
including the climatic range of practically all of this country. The

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