

1. The Maize Project.

Corn pollination has occupied our attention during the last few weeks. The material is a part of the breeding program of Dr. Dioscoro L. Umali, Cornell Ph.D. '49, who is in charge of the Division of Plant Breeding in the Department of Agronomy.

In addition to Doctor Umali's material, a considerable collection of varieties, inbreds, and crosses was received through the kindness of Dr. Sterling Wortman, In-charge of corn improvement for the Rockefeller Foundation at Mexico City, Mexico, and from Dr. Lewis M. Roberts, Director of the Rockefeller Foundation Agricultural Program in Columbia, Medellin, Colombia, S.A. This introduced material is now approaching the tasseling stage as it was planted somewhat later than Doctor Umali's material. A collection of inbreds and hybrids was received also through the help of Dr. F. D. Richey, Coordinator of the Southern Corn Improvement Program in United States.

A brief description of the status of Doctor Umali's breeding program may be of interest to corn workers and to other corn breeders. Doctor Umali's material consist of inbred lines produced from four different flint varieties. These are called College Yellow Flint, Cuban Yellow Flint, College White Flint, and Bicol White Flint.

The two Yellow Flint varieties are distinctly of different genetic origin and that, probably, is true also of the two White Flint varieties. Previous to this crop season, Doctor Umali has tested the combining ability of a considerable number of Flint inbreds from each of the varieties. With the Yellow Flint material the combining ability of the College Yellow inbreds was determined by top crossing these with Cuban. The Cuban inbreds were tested in top crosses with College Yellow. The inbreds of the two White varieties have been tested in a similar manner.

During the present crop season the following procedures have been carried out. Five to ten inbreds of good combining ability were selected from previous yield trials from each of the four varieties. Recently, we have completed producing the following types of single crosses: (1) Intercrosses between inbreds of College Yellow, (2) intercrosses between Cuban inbreds, and (3) all possible crosses between each inbred of Cuban with each inbred of College Yellow.

We are looking forward with a great deal of interest to the yielding ability and other characteristics of these crosses as determined from rather extensive yield trials which we propose to make during the next season's crop. As two crops of corn can be grown for a year here, the program is almost a continuous one. We also hope to make some combinations between introduced material from Mexico, Columbia, and southern United States with inbred lines obtained from the local varieties here.

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