

CENTRAL MAIZE RESEARCH STATION
Yousafwala (Sahiwal), West Pakistan

1. Further studies on sorghoid maize.

The sorghoid plants reported in the Maize Genetics News Letter (1966) were selfed as well as sib pollinated during the spring season of 1966. Some of these plants were also crossed to normal maize. The F_1 , F_2 and backcross generations resulting from such crosses were studied during the regular season, i.e. late summer.

Plants in the first filial generation had normal tassels and ears except that in several plants the ears were branched. In almost all cases, there was only one branch and that arose from near the bottom of the ear. Number of kernel rows on the branches varied from 6 to 8. These branched ears were no different than those commonly observed in some of the modern races of maize. The main ear and the branch had normal cob (pith). In the second filial generation some plants were observed that had relatively more branching of the ear than the F_1 . The number of kernel rows on the branches was decreased and the amount of pith was also reduced. Plants with three to four branches were also observed in this generation. Backcrossing to the normal parent gave progenies which had normal ears. Progenies of the plants backcrossed to the sorghoid type parent had a relatively higher percentage of branched ears.

Study of the selfed progenies of the sorghoid plants revealed that the tassel character, especially the condensed branching, attained a relatively high degree of uniformity while the typical sorghoid branching of the ear could only be observed in a few plants in some of the progenies. The most interesting feature in the progenies of self-pollinated sorghoid plants was the tendency towards hermaphrodite florets in the tassel. The carpels were, however, nonfunctional and the stigmas were unbranched. Study of this character in further generations will be continued.

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1. Notes on *Tripsacum* cytotaxonomy.

Cytological studies of plants at the Fairchild Tropical Garden during the past year have contributed information that may be useful in clarifying certain species relationships. Most of the observations were made on plants from our 1963-1965 collecting trips to Mexico, Guatemala and Colombia, S. A., additional collections from Guatemala and Honduras made in December, 1966, and a recent collection by Dr. John Popenoe, director of the Fairchild Garden, from Great Inagua Island in the Bahamas.

Chromosome counts of $2n = 36$ were obtained from three populations of *T. latifolium* Hitch. at Cubilguitz, Alta Verapaz in the tropical rain-forest area of central Guatemala, from two additional populations of this species from the north shore of Lake Izabal in southeastern Guatemala,