WASHINGTON UNIVERSITY - MISSOURI BOTANICAL GARDEN
St. Louis, Missouri

1. Genetics of tillering.

This past summer reciprocal crosses were made between translocation stocks and several stocks which are highly tillering in Massachusetts. These were Ladyfinger Pop, New York Flint, Golden Bantam Sweet Corn, Golden Cross Bantam Sweet Corn, a tillering stock obtained from Kermicle and another obtained from W. L. Brown. Backcrosses were also made from earlier Parker Flint-translocation F_1's to each parental stock. Studies are continuing.

N. H. Nickerson

2. Responses of na_1/na_1 to maleic hydrazide-indole butyric acid treatments.

Among a series of treatments on genetic forms involving several growth regulators and their combinations, a rather striking effect was noted. In a population segregating 1:1 for na_1/na_1 and $+/na_1$ a group of 17 plants which received MH one day and IBA the next throughout the growing season had no na plants manifested. The probability of these 17 plants being all $+/na_1$ is .008 by one statistical approach; there is thus a significant indication that the effect is a real one. Backcrosses of most of these plants to na_1/na_1 plants were obtained to verify their genetic constitutions in 1963. Studies will be continued further.

N. H. Nickerson
M. T. Shealey

3. Other effects of maleic hydrazide on maize.

Differences noted between separate strains of Coop stocks were extremely marked. On the one hand, in such stocks as those carrying Vg, apparently no new mitoses would occur after treatment started; leaves subsequently produced became narrower from base to tip with the uppermost ones reduced to short bladeless midribs. On the other extreme, some stocks did not show any appreciable change from control plants, even though the dosage of MH was the same in all cases. MH suppressed expression of Kn, as did naphthalene acetic acid, but plants remained essentially as vigorous as controls.

N. H. Nickerson
R. Colby