approximately the same length as the extra chromosome) will be added to test for the possible presence of "distributive pairing".

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3. The duration of synizesis.

A Black Mexican sweet corn plant was grown outdoors in a pot and brought into the laboratory at sporocyte stage. The stem was opened and the intact tassel (still attached to the plant) was spread out on a plate supported by a ringstand clamped to the pot. Anthers were removed from every second or third spikelet and scored for stage. The entire tassel and its supporting plate were then enclosed in a plastic bag to prevent drying. (Intact spikelets retained a fresh appearance throughout the entire experiment). Remaining anthers were removed periodically and scored for stage. Assuming that the 13 spikelets bracketed at the beginning of the experiment by spikelets at synizesis were themselves at that stage, the approximate duration of synizesis in this plant (at 25° C) is estimated to have been 50-52 hours. The time to typical early pachytene stage varied from 17 hours to 54 hours, and the mode was in the 46-50 hour class. It is thought that those spikelets requiring near maximum time most nearly represented a full synizetic duration, the others probably having progressed beyond earliest synizesis at the beginning of the experiment. From fewer observations it is guessed that the duration of pachytene under these conditions was approximately 5 hours, and the remainder of meiosis about 1 hour.

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1. Genetics of tillering.

The studies on attempted identification of tillering genes by means of a series of 17 translocations are continuing. Two sets were planted out last year. One group, involving grassy-tillered stock, showed no tillers in either the wx/wx crosses or the Wx/-