

II. REPORTS FROM COOPERATORS

BOSTON COLLEGE
Chestnut Hill 67, Massachusetts
Department of Biology

1. Further studies on T6-9t in maize.

As reported previously (M.N.L. 39: 5-6, 1965), a reciprocal translocation between the long arm of chromosome 6 and the short arm of chromosome 9 was found. In addition to the high frequency of chain configurations at diakinesis and low ovule sterility of the plants heterozygous for this T6-9t, it was further observed that the average pollen sterility of five plants was 15%, which is much lower than expected. This might indicate that the anaphase I disjunctions were not at random. It is likely that the alternate type of disjunction, leading to the production of fertile gametes, was favored against the adjacent types.

In the summer of 1965, progeny of the cross $\underline{Y} \underline{y} \underline{T} \underline{N} \times \underline{y} \underline{y} \underline{N} \underline{N}$ and its reciprocal was classified. The results are shown in Table 1. Among a total of 241 plants examined, 230 were parental types, while 11 were recombinants. Therefore, the recombination frequency is five per cent. The distance between the \underline{Y} locus and the point of break of this translocation in the long arm of chromosome 6 is five crossover units. Whether the point of break is distal or proximal to the \underline{Y} locus has not yet been determined. Data locating the point of break of this translocation in the short arm of chromosome 9 are incomplete. Further studies are in progress.

Table 1
Results of the cross $\underline{Y} \underline{y} \underline{T} \underline{N} \times \underline{y} \underline{y} \underline{N} \underline{N}$ and its reciprocal

	N y	T y	N Y	T Y
No. of Plants	114	2	9	116
X-over Plants'		2	9	
Parental Plants	114			116
% of X-over			5	

Y. C. Ting
Hei-sook Park