

No significant differences in female fertility between K10-carrying plants and k10 controls are noted for lines A and B although larger populations may be required to detect small differences that may exist. In line C, however, there was significantly greater ovule abortion in K10-carrying plants than in k10 controls.

Although K10 was found to increase the recovery of chromosome 3 and 9 genetic recombinants in lines A and B, respectively, its presence was not accompanied by significant changes in chiasma frequency, as determined from the metaphase I frequencies of bivalents, trivalents plus univalents, and quadrivalents, in any of the three lines. It is thus not possible to correlate K10 effects on female fertility with changes in chromosome pairing relationships at meiosis.

However, in view of the previous report, it may be suggested that an increase in female sterility in the presence of K10 in line C reflects an increase in gametic aneuploidy resulting from K10-accentuated numerical non-disjunction. The lack of a detectable effect of K10 on fertility in lines A and B could be a reflection of the differences between line C and lines A and B in overall chromosome knob constitution. That is, if non-disjunction is correlated with neocentric activity (see above report) then plants with more chromosome knobs should exhibit more non-disjunction. On this basis, there should be a greater number of knobs in line C than in line A or B plants to account for the differential effect of K10 on fertility. Because of the lack of complete information on knob constitution in the three lines, it will be necessary to await further experimentation designed to adequately test the hypothesis of a relationship between knob constitution, non-disjunction, and K10-accentuated sterility.

A. J. Snope

#### 4. A plant with opposite leaves.

During the summer of 1964, twin plants from one seed were observed which apparently bore two leaves at each node. The leaves were inserted opposite each other, and ear shoots also appeared in pairs inserted opposite each other. Both members of the uppermost ear shoot pair were fertile. It seemed highly possible that this trait might be inherited since two plants germinated from the same seed, and both possessed this trait.

However, when the plant was selfed, no opposite-leaved offspring were obtained in a population of 100 plants.

A careful morphological examination revealed that there were two meristematic areas at each apparent node. This indicates that the plant actually had alternating long and extremely short internodes.

David Weber  
Paul Weatherwax