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1. Distribution and analysis of *Tripsacum dactyloides* in Illinois.

A survey of the distribution of *T. dactyloides* (L.)L. in Illinois has been in progress for 2 years. Using herbarium records and published reports as a guide to "car window" surveying, the authors have collected material from 26 different sites in 14 counties in central and southern Illinois. Seventeen of these sites had been previously reported and 9 new sites have been found.

The ploidy level of the different colonies is being investigated. From preliminary observations, it appears that both diploid ($2n = 36$) and tetraploid ($2n = 72$) races are present. Mixed colonies of varying ploidy levels may also occur. An attempt is being made to correlate certain characters with ploidy level in order to facilitate analysis of the distribution of the diploid and tetraploid races in the state.

Individuals from each site are being tested for ability to hybridize with corn. By pollinating shortened corn silks, it has been possible to produce 19 hybrids without resort to embryo culture. Seven of these hybrids were obtained from only 18 ears pollinated by a clone from near Sandoval in Marion County.

Efforts are being made to hybridize *T. dactyloides* with a set of chromosome marker stocks of maize. If a complete set of such hybrids can be produced, the contributions of particular Tripsacum chromosomes or chromosomal segments will be assessed by backcrossing to the proper marker stock.

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