1. Monoploidy versus selfing in inbred production.

Isolation of monoploid maize plants by genetic screening methods was developed by Dr. L. F. Randolph and recently put into large scale operation by Dr. S. S. Chase. Many corn breeders are now interested in producing inbred lines by doubling monoploid plants.

The advisability of using this system in a breeding program depends upon two points; first, whether lines may be developed more cheaply than by selfing; and second, whether the lines are superior to selfed lines.

In 1950, four single cross hybrids were tested for frequency of haploidy. Results of this test are given in the table below.

Hybrid	Tester ($a_1A_2CR^rBPlPrlg$)	Mean number of identified monoploids per thousand seedlings
B10 x Oh41	R 43687-1	3.0
B10 x Hy2	"	0.6
R61 x 187-2	"	1.2
WF9 x 38-11	"	1.6

Lines are being produced from the single cross B10 x Oh41 both (1) by doubling monoploid plants and then self-pollinating, and (2) by ordinary selfing. The relative value of lines produced by each method is to be assessed in field trials of single crosses between lines derived by each method and a common parent.

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