5. Comparative performance of inbred lines and their testcross progenies at different populations per acre.

Thirty-two inbred lines of corn were planted at five different populations per acre in the A.E.S. 600 zone of Minnesota.

Rows 40 ins. apart.					
Approximate population:	12000	16000	20000	24000	28000
Rate and distance within rows:	2/26 ins.	2/20 ins.	2/16 ins.	2/13 ins.	2/11 ins.

Another trial containing the testcross progenies of twenty of these inbreds, resulting from testcrosses onto two double cross hybrids, was grown at two population levels, 16000 and 20000 plants per acre, with two replications at each of four locations all in the A.E.S. 600 zone of Minnesota.

Rows 40 ins. apart.		
Approximate population:	16000	20000
Rate and distance within rows:	2/20 ins.	alternating 2 and 3/20 ins.

Notes were taken on the dates of tassel emergence, pollen shedding and silking, plant height and ear height, and the number of good ears, bad ears and dropped ears on the inbred trial and the testcross trial grown at Waseca.

From these results it is intended to find the effects of population level on these characters of the inbreds and their testcross progenies. Also a study of the correlations between the performances of the inbreds and the testcrosses will be made to find if there is any relationship between the two.

Preliminary results from the inbred trial show a wide range of kernel moisture percentage at harvest time; there seems to be a tendency, as would be expected, for the higher populations to give higher moisture content, i.e. high population levels tend to delay maturity. Tassel emergence, pollen shedding and silking dates are all delayed with increase in population level.

A detailed analysis of all results is at present being prepared.

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