

obviously economic, but that its potential can best be unlocked by one large, unified, completely mechanized effort among maize people. Since the entire winter maize enterprise lies well within the scope of a modern one-man management and equipment corn growing unit, and since we have already established the roots of such an organism, we are seeking to make our own operation economic by inviting outside interest.

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1. An effect of the  $o_2$  gene in maize.

Preliminary experiments with opaque-2 material showed a lower test weight and a very high susceptibility in a cold test. The results of the tests with two selfed flint/opaque-2 crosses are given in the table.

	<u>Phenotype</u>	<u>Test wt.</u>	Average germination	
			10 days at 10°C. 4 days at 27°C.	7 days at 27°C.
CR37/ $o_2$ ⊗	flint	67	84.0	100.0
CR37/ $o_2$ ⊗	opaque	57	20.0	77.5
CR39/ $o_2$ ⊗	flint	66	83.0	99.5
CR39/ $o_2$ ⊗	opaque	59	25.0	95.5

Eventually selection for high specific weight through sucrose or sodium thiosulfate solutions can be useful as it has been observed in other preliminary tests whose results are not shown.

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