Gene Combination	% Amylose	Birefringence End Point, °C	Phenotype
Normal dent	27	68	Normal dent
du	38	69	dull dent
ha	61	89	tarnished dent
su	30	65	wrinkled
su_2	42	55	translucent, full
wx	0	68	opaque
du ha	58	70	translucent, full
du su	64	68	wrinkled
du su_2	48	56	translucent, full
du wx	0	70	opaque, shrunken
ha su	60	85	translucent, full
ha su_2	40	83	opaque
ha wx	15	72	opaque, shrunken
su su_2	56	66	wrinkled
su wx	0	67	wrinkled
su_2 wx	0	53	opaque

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5. Recombination with Y and su_2 in T6-10b.

The interchange point in T6-10b is very close to Y. Repeated backcrossing of y^T/YN to a du su_2 stock since 1951 has finally resulted in a Semisterile YY su_2 su_2 plant. This will permit a test for linkage between su_2 and y in the homozygous translocation. If linkage is found, y will have been placed on the long arm of chromosome 6 distal to the translocation point. In the absence of linkage the position of y will remain uncertain.

6. Close linkage of y, ms-si, and rg on chromosome 6.

Material heterozygous for Yy, for a new "male sterile silky ear" mutant, and for a new recessive ragged leaf seedling mutant supplied by E. G. Anderson, who had located them on chromosome 6, was planted out.

Data from y si/Y Si selfed gave 48 Y Si: 1 Y si: 1 y Si: 39 y si for which recombination by maximum likelihood is 1.8%.

Preliminary germination tests from two selfed ears of y Rg/Y rg gave no ragged seedlings from 36 white kernels tested indicating close linkage of y with rg.

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7. Mutable su.

In 1955, a stock from Dr. McClintock carrying one Ds and one Ac was used as a pollinator on a sweet corn hybrid. From 500 outcrossed ears, about 1,000 endosperm mosaics were selected and planted in 1956. Out of approximately 500 selfed ears, two proved to be mutating su, Su, phenotype. It is hoped that a series of alleles can be isolated at the su locus.

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1. Comparative performance of some hybrids from Mexico, Colombia and Brasil.

During the season of 1955-56, an experiment in a 4 x 4 simple lattice with 4 replications, was carried out to test five three-way crosses of yellow dent corn from the Agricultural Program in Mexico for tropical regions, four double hybrids, of which three were orange flint (Rocol H-201, Rocol H-202, Rocol H-203), one white flint (Rocol H-251) two orange flint varieities (Eto and Peru 330), from the Agricultural Program in Colombia, three semi-dent double hybrids in distribution in our region and two synthetic varieties one being yellow dent (Pelotas) and one orange flint (Marilia). The Mexican hybrids used are experimental ones and were the best of some 300 in Mexico, according to Dr. Robert D. Osler. The pedigrees of these hybrids are as follows:

SR54

277 x 267	SLP28-2-1	x (Cap. Amar. 76-4x Cap. 66-2-1)
289 x 267	Ver. 55-4-1	x (")
275 x 268	Cap. Amar. 76-3	x (SLP28-2-1-3-x Cap. 66-2-1)
284 x "	Cuba 23-7-1	x (")
285 x "	Cuba 23-7-2	x (")