

2. Progress on big rings in corn.

Two rings of 10 were observed in F_1 plants from crosses between stocks homozygous for interchanges involving 3-2-4-9-10 and 1-5-6-7-8. No pollen was shed, but open pollinated ears set 0 to 6 seeds (ears with about 600 ovules). Backcrosses were made to both parents as the first step in establishing a line homozygous for both groups of interchanges.

Lines homozygous for 3-2-4-8-6 were established also and crossed with a 5-7-1-9-10 stock.

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3. Chromosome 3 linkage test.

Tests between the W7748 albino and ba_1 failed to give any indication of linkage.

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4. Notes on the 2-6 interchanges.

We now have all but two of the 24 stocks listed plus two additional ones not listed. The following stocks listed as 2-6 interchanges in the 1961 Crops Research ARS 34-16 list of interchange break points are shown by linkage tests with $lg\ gl\ B\ V_1$ not to involve chromosome 2: 4394, 6671, and 5648. The break points for three which do not have the breaks in 6L as listed are: 2-6 (027-4): 2L.1-6 org.; 2-6e:2S.18-6S.20; and 2-6 (5648): (not 2)-6S.19 .

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5. Notes on the functioning of Dp-Df classes from interchange heterozygotes involving chromosome 6.

The following interchanges when heterozygous give a ratio of about 1 partially sterile: 2 fertile through the ♀, probably a result of the functioning of one Dp-Df class:

| <u>Interchange</u> | <u>Probable Df-Dp</u> |
|---------------------------------------------|-----------------------|
| listed as 2-6 (4394) but does not involve 2 | 2S-6L |
| 2-6 (001-15) | 2S-6 sat. |