

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.

C. R. Burnham
R. L. Phillips
J. Stout

3. Chromosome 3 linkage test.

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

C. R. Burnham

The following reports are based on studies supported by N.S.F. Grant GB 1586 and GB 5543, Renewal of GB 1586. Those assisting in the work were Dr. Ronald L. Phillips, Dr. Gary R. Stringam, Joseph N. Neubauer, John T. Stout, and during the summer, Alan Novak.

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 .

C. R. Burnham
J. Stout
R. L. Phillips

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.