3. The effect of B chromosomes (continued).

In a previous report (MGCNL 37), it was noted that the effect of B chromosomes could be evaluated by studying the variances of pollen grain size. In comparisons of B and non-B containing lines, differences could be detected at the 10% level of significance with the increased variance in the B-chromosome containing lines. Subsequent analyses have confirmed this result and at the 5% level of significance. This would confirm the previous result that B-chromosomes can affect the physiology of pollen grain growth.

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1. A dormant allele of vp1.

Viviparous-1 is a premature germinating mutant which is located in the distal nine-tenths of the long arm of chromosome 3 (the region translocated in TB-3a). It is probably located just distal to the break point of TB-3a since it shows close linkage with T3-9a (3L.19) and T3-9c (3L.15) and very little or no linkage with a1.

The viviparous seedlings of this mutant are green and they grow into normal plants. Seeds that are of the genotype vp1 vp1 are not only viviparous but they also produce little or no aleurone color in stocks that are otherwise homozygous for the genes responsible for colored aleurone. Frequently, the color inhibition is not complete, resulting in seeds with a slight tinge of color similar to that seen in seeds of the constitution $C^{I}CC$.

In 1961 crosses were made between heterozygous vp1 plants which were homozygous for purple aleurone and a stock obtained from K. S. McWhirter, then at the Univ. of Wisconsin. The McWhirter stock was supposed to be homozygous purple aleurone but was segregating for a non-purple mutant which showed a tendency to be viviparous. The segregating F_1 ears of this cross produced 3 purple : 1 non-purple seeds. No viviparous seeds were observed on these ears. In 1962 fifteen