

4. Allele tests with vp-2.

The early allelic tests with vp-2 established that the mosaic condition was dominant. However, nothing more was learned about the relationship of vp-2 and green mosaic because of the vivipary and small seed size which was very prevalent in these crosses. These tests will be repeated with our improved stocks.

5. Levels of mutability.

Not all stocks of the mutant show the same level of mutability. Five different classes have been designated: 1) Very strong, many flecks and streaks of green; 2) Strong, liberal number of flecks and streaks; 3) Light, few scattered back mutations to normal; 4) Light-minus, very few small flecks of green; and 5) Weak, with only one to several small green spots. These classes have been selected for convenience of classification and do not necessarily indicate any basic genetic differences. They might be a reflection of the variability in our stocks. To reduce such variability to a minimum, plans are being made to convert these mosaic stocks to a more uniform background. Pure breeding strong and weak mosaic lines which consistently give uniform seedlings have been isolated. The relationship of the other three classes to these is not certain.

6. Intercrosses between mosaic classes.

Crosses between several of the classes of mosaic seedlings have been made this past year with the following results:

Very strong mosaic X White)	all gave light mosaic seedlings
Very strong mosaic X Weak mosaic)	
Strong mosaic X White)	
Weak mosaic X White		gave weak mosaic seedlings.

7. White green mosaic lines.

Two true breeding white lines have been selected from mosaic stocks. The first was obtained from the progeny of an ear that was segregating mosaic and white seedlings. The record on the original ear was made before the various classes of mosaic seedlings were recognized. However, the second white line had its origin in a progeny that was segregating strong and weak mosaics. This year seven apparently new true breeding lines were isolated. One was from a line segregating strong and weak mosaic. The others were from lines segregating strong mosaic, weak mosaic, and white seedlings.