CROW'S HYBRID CORN COMPANY
Milford, Illinois

1. Mutations affecting carotenoid synthesis.

Seeds of the M14 mutant and of the Ohio 7 mutant described last year were sent to California for comparison with other known types. No report has been received as to whether these are identical with other mutations of a similar type that have already been described.

2. Semi-dwarf.

The F_2 generation of crosses between our lines and semi-dwarf strains from Guatemala segregated for semi-dwarf this past year, and the dwarf plants were selfed. Crosses will be made in 1957. One of the problems with dwarf hybrids will be weed control in the seedling stage. Chemical weed killers may help solve the problem.

3. Twin shoots.

We had one line of twin-shoot material that was homozygous for the character this year. We made reciprocal crosses between single twin shoot plants and single plants of a normal single-eared line to make a more careful study of the mode of inheritance.

4. Siberian corn.

We obtained some seed of a very early strain of Siberian corn from Herbert Plambeck, Des Moines, Iowa who made a trip with American farmers to Russia. We selfed a number of the plants and divided the pollen to make crosses on our early inbreds. The crosses all set seed but the selfs did not. The only seed we got was from a sib-pollinated ear. I made the pollinations myself and have no explanation for the results. We will repeat the work this year to see whether there is some incompatability that prevents seed setting when the plants are selfed.

5. Pollen restorers.

We have a large number of lines that have been recovered from crosses with Guatemalan, Puerto Rican and Cuban varieties. These were all crossed on our male-sterile lines in 1955. In 1956, we found that 14 of these lines were good restorers of pollen. Further tests will be made to see whether these are all carrying the same gene for restorer.

W. J. Mumm