The analysis of hexoses, pentoses, disaccharides and $H_2O$ soluble polysaccharides is continuing for the pollen genotypes listed above.

John Vandermeer

## 2. Preliminary biochemical investigation of the $yg_2$ locus.

As part of an undergraduate research project, a study of the leaf pigments of $yg_2/yg_2$, $yg_2/+$, and $+/+$ plants was initiated. Using spectrophotometric techniques, the amount composition of chlorophyll A, chlorophyll B, xanthophylls and carotene were determined after extraction from fresh tissue.

At maturity (pollen shedding) the following observations were made:

(1) $yg_2/yg_2$ possessed less chlorophyll B and carotene than $+/+$, on a dry weight basis;
(2) $+/+$ possessed more xanthophyll than $yg_2/yg_2$;
(3) the chlorophyll A content was the same in both genotypes;
(4) $yg_2/+$ presented the spectra of the $+/+$ genotype.

Chlorophyll A and B were estimated for 55 day old $yg_2/yg_2$ and $+/+$ plants (11 leaves) grown under controlled supplemental lighting, November-December 1965. The top three leaves demonstrated the differences noted above, whereas the middle four leaves from the two genotypes were not different.

Comparison of tetraploid vs. diploid stocks ($yg_2/yg_2/yg_2/yg_2$ vs. $yg_2/yg_2$) did not yield any differences in the relative amounts of pigment per unit dry weight or the distribution of the pigment.

M. C. Weir

## 3. Smear technique for obtaining large numbers of metaphases in corn root tips.

The method for root tip smears of Wolff and Luippold (Stain Technology 31: 201-205, 1956) was modified for corn as follows:

(1) Orient seeds with embryos up on moistened filter paper in Petri dishes. Incubate 36-40 hours under intense, constant light at 30°C. (The radicle should be 3-5 mm in length).
(2) Transfer the seed to a new dish, same conditions, except that a 0.2% colchicine solution has been added to the filter paper. (A drop of tween-80 added to the solution seems to yield more cells in metaphase). Incubate for 8 hours.
(3) Fix immediately in Carnoy's. Transfer to fresh Carnoy's and incubate for 24 hours at 60°C.
(4) Pour off Carnoy's. Rinse thoroughly with distilled water.