

UNIVERSITY OF ILLINOIS  
 Urbana, Illinois  
 Department of Agronomy

1. Potassium content of opaque-2, flourey-2, double mutant and normal versions of certain inbreds and hybrids.

Potassium was first reported to be higher in opaque-2 kernels by Goodsell (Crop Sci. 8:281-282). He used  $F_2$  kernels from segregating ears to make his comparisons and found that opaque-2 kernels averaged 41% higher in potassium than normal siblings on the same ear. The data in Table 1 are from homozygous ears of inbred lines converted to opaque-2. Here again,  $o_2/o_2$  segregates are higher in potassium than normal segregates in all cases. However, the level of potassium is a function of the inbred line and can vary quite extensively. Since the assay for potassium is simpler, cheaper, and more precise than that for lysine, it was proposed at one time that potassium level be used as a rough screening technique for lysine level. But this data would tend to suggest that in a heterogeneous opaque-2 population, the level of potassium would be independent of lysine level. The limited data for flourey-2 and the double mutant are shown, but little should be made of them because they are in the initial stages of conversion to the inbred line.

Dennis Elmore  
 D. E. Alexander

UNIVERSITY OF ILLINOIS  
 Urbana, Illinois  
 Department of Horticulture

1. Chlorophyll-deficient mutants have differential capacities to accumulate assimilation starch.

Five chlorophyll-deficient mutants ( $\underline{1}_3$ ,  $\underline{1}_4$ ,  $\underline{1}_7$ ,  $\underline{1}_{4920}$ ,  $\underline{w}_{11}$ ) out of 17 stocks tested (former plus  $\underline{w}_1$ ,  $\underline{w}_2$ ,  $\underline{w}_3$ ,  $\underline{yw}_{8896}$ ,  $\underline{wh}_{8657}$ ,  $\underline{cl}_1$ ,  $\underline{1}_1\underline{w}_2$ ,  $\underline{1}_6$ ,  $\underline{1}_{4923}$ ,  $\underline{1w}_1$ ,  $\underline{1w}_2$ ,  $\underline{1w}_3\underline{1w}_4$ ) accumulated significantly less assimilation starch from exogenous glucose than their normal sibs. Initial screening