

## 2. Chlorophyll content in maize.

In a study on the chlorophyll content of 17 inbred lines and 24 single-crosses, highly significant differences occurred for total chlorophyll, chlorophyll a, chlorophyll b, visual chlorophyll ratings,  $C : C_b$  ratios, and yield in pounds per plant both among inbreds and among hybrids. Highly significant correlations of  $r = -.76^{**}$  for inbreds and  $r = -.69^{**}$  for hybrids occurred for total chlorophyll and visual rating.

Total chlorophyll of the hybrid was in all instances characteristically greater than the mean total chlorophyll of the inbred parents. Thus, heterosis for chlorophyll was present. In fact, a high correlation ( $r = .93^{**}$ ) was found between hybrids that exhibited high heterosis for yield and those that showed a high heterosis for total chlorophyll.

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## 3. A combined source of resistance to maize dwarf mosaic virus and corn stunt virus.

In the 1966 Maize Genetics Cooperation News Letter, GA 209, a white inbred line, was reported as giving excellent ratings of resistance to dwarf mosaic virus in tests in Tennessee and Ohio. Since then, tests in Louisiana and at the Corn Virus Laboratory at Mississippi State University reveal that this inbred also has resistance to the corn stunt virus. Thus, a single inbred is available for use in inheritance studies and in breeding programs as a source of resistance to both virus diseases.

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## 1. Effect of kernel position on fatty acid composition of corn oil.

Considerable interest has recently been shown in genetic studies of the fatty acids of corn oil. Fatty acid analysis of the oil from individual kernels will be required to obtain the appropriate genetic information. Therefore, the question arises whether single kernels can be selected at random for analysis or whether the location of the kernel on the ear may influence oil composition. If kernels are selected at random and a significant kernel position effect on oil composition exists, then the environmental effect (kernel position) cannot be separated from the genetic effect.

The effect of kernel position on oil composition was studied on 12 inbred lines and 2 single crosses grown in 1965 and on 4 of these inbreds grown again in 1966. Five oil samples (4 single kernels and a bulk oil sample