

This would indicate that miniature seed (mn) is located between v<sub>1</sub> and gl<sub>2</sub> having 16% recombination with v<sub>1</sub> and 38% recombination with gl<sub>2</sub>.

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1. Variable reaction of the monogenic resistant varieties Lady Finger Pop Corn and G.E. 440 to H. turcicum.

Lady Finger Pop Corn (PI. 217407) and inbred G.E. 440 have been reported by Hooker (1963) to carry dominant monogenic resistance to H. turcicum, the causal organism of the northern leaf blight of maize. He further observed that the genes controlling restricted chlorotic type of lesions in the two cultures were either alike, allelic or very closely linked. Recently Sharma and Aujla (1966) for the first time observed that the variety Lady Finger Pop Corn was highly susceptible to leaf blight in the northern hills of India (Kulu Valley). Since this observation differed from the report by Hooker, it was thought that the H. turcicum culture prevailing in India may be a different biotype than the isolates used by Hooker for studying the reaction of the variety. Prompted by this, it was thought desirable to study the reaction of G.E. 440 also to the prevailing biotype in the field inoculum.

The observations were taken on Lady Finger Pop Corn as well as on G.E. 440 at two different locations, viz. Bajaura (Kulu Valley) and Hyderabad. The reaction type on the two cultures was characteristically distinct at both places. On G.E. 440 the lesions were typical as described for the inbred by Hooker giving a restricted chlorotic type, while in the case of Lady Finger Pop Corn the lesions were clearly of the susceptible type as reported earlier by Sharma and Aujla. Later on these findings were confirmed under controlled conditions at the seedling stage in pots at Bajaura.

This sort of differential reaction of the two varieties indicates the presence of either different alleles at the same locus or different closely linked genes. The study is in progress and an F<sub>2</sub> population from the cross between Lady Finger Pop Corn and G.E. 440 will be studied for reaction to leaf blight in the 1968 rainy season.

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1. Determination of amino acids in maize through a microbiological method.

Since the discovery that varieties of maize containing the opaque-2 (o-2) gene have higher amounts of certain amino acids, mainly lysine, there is