

A negative correlation was found between methionine content of protein and the protein content for 16 varieties. The correlation co-efficient (r) is -0.54909 and the regression line was found to be  $y = 3.2139 - 0.1142 x$ . However, when the six hybrids along with opaque-2 and local varieties were considered these values were found to be  $r = - 0.873$ ;  $y = 4.2159 - 0.2287 x$ .

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## 2. A correction for lysine content.

In last year's Maize News Letter (1967) seven varieties of maize were analyzed for protein and amino acid composition. The lysine content was reported higher (ranging from 0.52-1.18) due to the use of lysine hydrochloride as a standard for bioassay and should have been multiplied by 0.8 to get the following correct lysine content in each variety, Opaque-2 4.74, Deccan hybrid 2.82, Ranjit 2.36, Ganga 101 2.08, Ganga-3 2.80, Hi Starch 2.21, Ganga sufed-2 2.40, Local variety 2.35.

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## 3. Incorporation of the opaque-2 gene into Indian inbred lines.

A breeding program was initiated in collaboration with the Maize Research Station (Amberpet, Hyderabad) to incorporate the opaque-2 gene in the desired background of Indian inbred lines and to ultimately recover the varieties with the opaque-2 gene. Thirteen inbred lines were used, including CM 105, CM 109, CM 110, CM 111, CM 201 and CM 202 which went into the leading Indian hybrids.

The opaque-2 gene in the yellow and white background was recovered by selfing the  $F_1$  of these inbreds. The work is being continued with backcrossing the selected  $F_2$  seed to their respective recurrent inbred lines. These varieties will be further tested for protein and lysine content as well as other amino acids in order to evaluate the performance of the opaque-2 gene in different genotypic combinations.

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## 4. Reversion of opaque-2 by diethyl sulfate (DES).

Opaque-2 white seeds (667) were treated with a 0.05 M concentration of DES for 8 hours by changing the treatment with fresh solution every hour. Besides a few chlorophyll sectors, five yellow seeds were obtained on independent selfed ears. Further tests will eliminate the possibility of contamination.

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