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## Correlation Studies of Zea mays under Field Conditions

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All evidence points to splitting of the xylose molecule into fractions other than those containing 2 and 3 carbon atoms.

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## CORRELATION OF SHAPE OF FRUITS, COTYLEDONS AND SEEDS IN MELONS

LESLIE M. WEETMAN

The following is a brief report of a statistical study of the relationship between shape of cotyledons, shape of fruits, and shape of seeds in melons and citrons. The ratio of width to length was used as an index of shape.

In groups of many commercial, inbred, and hybrid strains of watermelons, coefficients of correlation obtained by correlating indices of cotyledon shape and fruit shape were positive and highly significant statistically. The coefficient for such a correlation in citrons was practically zero. A small group of plants of *Cucumis* gave a low but significant correlation coefficient between indices of cotyledon shape and fruit shape. Using mean shape indices for each variety, a significant correlation was also found between shape of seeds and shape of cotyledons in twenty-eight commercial varieties of watermelons. Likewise, in the same group, shape of seeds was significantly correlated with shape of fruits.

The cotyledons of watermelons were found to undergo a significant change in shape as the seedlings grew, this change being an increase in length over width.

BOTANY AND PLANT PATHOLOGY SECTION,  
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## CORRELATION STUDIES OF ZEA MAYS UNDER FIELD CONDITIONS

HAROLD F. EISELE AND J. M. AIKMAN

This paper is a report of statistical studies involving correlations between various growth responses of corn plants and factor data obtained in the immediately vicinity of the growing plants.

Weekly growth measurements of the corn plants were obtained and these were correlated with the factor data obtained from recording instruments.

DEPARTMENT OF BOTANY,  
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