Correlation Studies with Strains of Flax with Particular Reference to the Quantity and Quality of the Oil.—I. J. Johnson, University of Minnesota.

Forty-six varieties and crosses of flax were grown in 1929 and 1930 at University Farm, St. Paul, Minnesota. During each of the 2 years the percentage of oil, dry weight of 1,000 seeds, date of maturity, number of days from full bloom to maturity and, in 1930, the iodine number were studied. During both years the percentage of oil and, in 1930, the iodine number were correlated with each of the other characters by means of simple and partial correlation. Significant positive correlations were obtained between the percentage of oil and weight of 1,000 seeds, date ripe, and number of days from full bloom to ripe. A significant simple correlation between iodine number and weight of 1,000 seeds was obtained. Other simple correlations with iodine number were all negative but not statistically significant.

A further study of these relationships made in partial correlations gave a high positive correlation between percentage of oil and weight of 1,000 seeds and a significant negative correlation between iodine number and weight of 1,000 seeds with other variables constant.

Inter-annual correlations made between each of the characters studied indicated that they were relatively constant in their inheritance.

An Indication of the Relative Susceptibility of Dent and Flint Corn to Injury by Grasshoppers.—A. N. Hume, South Dakota State College.

Outbreaks of grasshoppers have been known to occur in several sections of the Middle West in the past season. These outbreaks have been described and technical means for combating such ravages by insects have been proposed by entomologists.

Corn growers and others, including agronomists, have had opportunity to note important variations in the susceptibility of different crops to grasshopper injury. An outstanding example of this, so evident to general observers as to require no proof, was the fact that sorghum, including saccharine and non-saccharine varieties, remained uninjured in areas where dent corn and many other crops were utterly devastated.

Evidence is presented to show that the injury to dent corn by grasshoppers was greater than to flint corn. The foliage of dent corn was devoured, whereas the flint corn, although somewhat injured by the insects, was able to function.