

3. Correlation between high corn protein percentage, refractometrical reading of stalk juice, and greenness of the vegetative part of the plant after grain maturation.

In the Maize Newsletter 29, we reported a parallelism in inbred lines between refractometrical readings (after grain maturation) and kernel protein percentage. In the 1955 trials, seven hybrids were analyzed for grain protein: one standard hybrid (Ohio M 15) and six other experimental ones superior in their refractometrical readings and greenness of leaves after grain maturation. The protein percentage in these six "sweet stalk hybrids" was higher than the protein percentage in the standard hybrid -- 13.63%–15.58% as compared to 11.98% for the latter. Among these seven hybrids there is no correlation between protein percentage and reduction in yield. Each sample analysis was representative of the four replications for each hybrid. Fertilizers applied by the hectare were: N = 140 Kgs.; P_2O_5 = 108 Kgs.; K_2O = 60 Kgs. See Table III.