

2. Old varieties of corn wanted.

The Colonial Farm is interested in antique varieties of corn. Last year Hastings Prolific was obtained from the originator, the Hastings Seed Co., in Atlanta, Georgia. This old variety was obtained from the Indians in the 19th century and has been maintained since by the Hastings Co. Does anyone know of similar old varieties?

3. National Colonial Farm now open.

The National Colonial Farm will be open to the public in the summer of 1969. Besides crop exhibits there will be livestock, characteristic of the colonial period around 1750. There will be Devon Cattle, Quarter Horses, Dartmoor Sheep, as well as hogs and poultry.

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1. Choice of characters for racial classification.

Analyses of variance for 111 characters from 55 races and sub-races of maize from eastern South America grown at Piracicaba, S.P., Brazil, between 1960 and 1965, indicated that those characters which were least affected by environmental factors and interactions were reproductive characters. In particular, the component of variance due to differences among races for certain ear and kernel characters was much greater than the sum of corresponding components due to differences among years and race by year interactions. The converse was true for all vegetative characters. Tassel characters tended to be intermediate between ear and plant characters.

While some indices had larger components of variance attributable to racial differences than to the effects of environment and/or environmental interaction, some commonly used ones, such as cob/rachis and

rachilla/kernel indices, proved to be quite susceptible to environmental influences. Again, indices based upon solely vegetative characters were consistently influenced more strongly by environmental factors and interaction than were those based on reproductive characters.

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1. Induction of chlorophyll sectors by DES.

Homozygous opaque-2 seeds were treated with various concentrations of DES ranging from 0.0025 M to 0.01M for 8 hrs. by replenishing the solution every hour. Among the 559 surviving plants, 176 were found to have three types of chlorophyll sectors, i.e., yellow, albino and yellow-green. The sectors ranged from 0.1 to 1.5 cm in width and from 1/3 to the whole length of the leaf.

Yellow sectors were more frequent on the 6th, 7th and 8th leaves and albino sectors were more frequent on the 6th and 7th leaves whereas yellow-green sectors were more frequent on the 5th and 7th leaves.

The three types of chlorophyll sectors were examined histologically; the yellow and albino sectors were found to have no chloroplasts, but the yellow sectors retained a yellow pigment in the bundle sheath. The yellow-green sectors showed chloroplasts only in the upper epidermis.

In the treated material it was observed that four plants had one leaf without a mid-rib and two plants had a terminal modified "thread like" leaf.

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2. Some pigment studies in different genotypes of maize.

The husk and aleurone tissue of cherry (r^{ch}) and purple (Pr) and husk tissue of B have been analyzed chromatographically and spectrophotometrically.

The comparison of Rf values and absorption maxima of various