

only the four common bases, then buoyant densities of 1.701 and 1.702 g/cm<sup>3</sup> have molar percentages of guanine and cytosine of 41.8 and 42.8, respectively.

The nuclear DNAs of corn, Tripsacum and their hybrids consisted of single main bands with no satellites, as revealed by the neutral CsCl analytical centrifugation technique. This has been characteristic of all the grasses thus far studied.

The nuclear DNA of Tripsacum is similar to corn and other grasses in that they all have relatively high buoyant densities and thus guanine + cytosine contents. In one case, the intergeneric cross of corn and Tripsacum was successful despite the fact that its two parents differed by 1% in guanine and cytosine content; the hybrid between the two different parents resembled the high parent, corn, in buoyant density.

C.S. Levings, III, and D.H. Timothy

A fast renaturing fraction of nuclear DNA of corn — When DNA is melted and then allowed to renature for a short period of time, a fast renaturing fraction of the total DNA can be isolated. Using this technique we have isolated and partially characterized a fast renaturing fraction of nuclear DNA (nDNA) of corn.

Nuclear DNA was isolated and purified as previously described (Shah and Levings, Crop Sci. 13:709-713, 1973). The DNA was sheared, melted at 100°C for 10 minutes and then allowed to renature (Cot = 1). Single- and double-stranded DNAs were separated by hydroxyapatite chromatography. Buoyant densities were determined in neutral CsCl with Micrococcus luteus DNA as a marker on a Spinco model E analytical ultracentrifuge (technique described in previous reference).

Under the conditions of this study (Cot = 1), a fast renaturing fraction of corn nDNA has been isolated which comprises about 11% of the total nDNA. Neutral CsCl analytical ultracentrifugation of this fraction revealed a single band with no satellite and a buoyant density of 1.708 g/cm<sup>3</sup>; since total nDNA has a density of 1.702 g/cm<sup>3</sup>, the fast renaturing fraction is richer in guanine and cytosine than the main band.

C.S. Levings, III, and D.H. Timothy

THE PENNSYLVANIA STATE UNIVERSITY

Department of Horticulture, University Park, Pennsylvania

"Normal"-appearing sugary alleles — As part of my studies of kernel carbohydrates, I am incorporating various sugary alleles into the W64A inbred. During back-crossing I have been able to identify self-pollinated ears segregating for su-am or su-66. Both alleles have near-normal phenotypes but have a translucent halo-