

## 1. Origin of cultivated corn races in the southern part of South America.

Flint-Races: The most common type is the Orange Flint which is subdivided into a large number of local races, and belongs to the general group of the Carribean [sic] Flints and must have migrated along the Atlantic Coast, before Columbus, to the southern corn limit in Argentina. There is an indigenous group of White Flint in north-western Argentina, which goes under the name of Calchaqui Flint, since it occurs in the area which was once occupied by this now extinct Indian tribe. There are three more types, two of which are most probably old synthetics: the Amarillo of Uruguay and Argentina, which probably is derived from a cross between Soft Guarany Yellow Corn and Cateto types, and the Cristal of Southern Brazil and Paraguay, probably derived from crosses between Soft Guarany Yellow and Calchaqui. Finally there is the Canario de Ocho, of Uruguay and northeastern Argentina with slender eight rowed ears and large kernels, which is a rather isolated type since no eight rowed types occur anywhere in the South American lowlands.

Of these flint types, the Orange Yellow Flint is the most cultivated; it constitutes the Argentinian export type. However it seems as a general rule that the maximum ceiling of combining ability of these flints is rather low, and thus they do not constitute a type which recommends itself for modern breeding work, as shall be shown later in this report.

Dent Races: There are two indigenous dent races in southern South America: The Capio of the high Andean valleys in northwestern Argentina and the Caingang Soft Dent (white) in southern Brazil. The latter has probably contributed to the formation of some old synthetics but the main bulk of Dent Types has been imported from abroad from the United States, since there is no record whatsoever about importation from Mexico. It is rather difficult to obtain exact information but there seem to have been several importations of U.S. Dents through government agencies in at least the last fifty years, and there have been probably some importations before this time, and also through refugees from the U. S. Civil War. In many cases, the type of ears and kernels still permits us to state which U.S. variety had been imported, but it is of special importance that in some areas, notably in Sao Paulo State, a natural synthetic of U.S. Dent and Cateto is forming. Paulista Dent thus has an origin somewhat similar to that of U.S. Corn Belt Dent, which is also considered to be a synthetic between dent and flint types. It is very highly productive with a much higher ceiling of combining ability than Cateto, and has harder kernels of much deeper orange color than U.S. dent. It will be shown later that Paulista Dent represents a very promising type for new breeding programs.