8. Tripsacoid maize in South America.

Evidence is accumulating that maize with Tripsacoid characteristics occurs not only in Mexico and Central America but also rather widely in South America. The following items, none in itself conclusive add up to a rather suggestive total. Some of these items may be mentioned elsewhere by others, but it seems worth while to summarize them here since the writer, on a recent trip to the countries of South America, has had an unusual opportunity to synthesize more or less isolated items of evidence.

A. We have received from Ing. Urbano F. Rosbaco in Argentina a strain of "Maize Amargo" which in its ear characters is the most Tripsacoid maize yet discovered. The glumes are thickened and indurated as in segregates of maize-teosinte and maize-Tripsacum hybrids. Plants of this maize, like the "Maiz Indio" of Colombia, tiller freely, have hispid leaf sheaths and thick drooping leaves. "Maiz Amargo" is somewhat resistant to the attacks of grasshoppers and other insects and this fact coupled with the resemblance of its ears to segregates of maize-teosinte and maize-Tripsacum hybrids led Ing. Rosbaco to suspect Tripsacum contamination. The chromosome-knob number of this maize, however, is low, suggesting that if it is the product of a maize-Tripsacum hybrid it may have had a knobless species of Tripsacum as one of its ancestors.

B. A variety of maize in Brazil received from Dr. Brieger has long stiff lower glumes. This character is being transferred by repeated backcrossing to the U. S. inbred A158. It appears to behave in inheritance as a unit character although it may involve a group of genes rather than a single gene. The unit character, whatever it may be, involves the first chromosome and is linked with the *P* factor on that chromosome with 34.6 percent of crossing over. This is believed to be the first instance of locating on a chromosome a Tripsacoid character occurring in an established variety of maize.

C. Dr. F. Brieger in Brazil has in his collections at Piracicaba a very maize-like Tripsacum obtained from the island of Marajo near the mouth of the Amazon. This Tripsacum is completely sterile. Preliminary studies show it to have 23 chromosomes. Dr. Brieger suggests that this Tripsacum may be a derivative of a maize-Tripsacum hybrid. (See also the description of "Maiz Indio" in the report of the Rockefeller Foundation Agricultural Program in Colombia).

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