

	Total plant number	Treatment	No. of plants with brace root development rating* of:					
			0	1	2	3	4	5
<u>Rootless</u>	94	TIBA - 100 micrograms daily	27	27	27	11	3	
<u>Rootless</u>	105	TIBA - 100 micrograms each third day	33	30	23	11	8	
	94	N <sub>6</sub> BZA - 100 micrograms daily	34	34	16	10		
	107	N <sub>6</sub> BZA - 100 micrograms each third day	38	27	28	13	1	
	197	none	79	56	44	11	7	
	100	water (control)	50	19	22	7	2	

Norton H. Nickerson

2. Races of maize in Panama.

Seeds from certain stocks collected in Panama, as noted in last year's Newsletter (Vol. 42), were grown in the Bahamas during the spring of 1968, and internode data on 5 - plant samples of fifteen stocks were obtained. The Bahamas experimental plot is being activated again this year in an attempt to obtain data on those stocks not yet known except from ear collections. The samples collected were analyzed for Fe, Cu, P, K, Ca, Sr, Mg, Mn and Zn by Dr. Jack Gamble of the University of Florida. In general, levels were low and did not vary significantly among the varieties or the locations collected.

Norton H. Nickerson

3. Bahamian Maize.

There are at least two "native" strains of maize in the Bahamas which apparently exhibit drought resistance. One of these appears to be an extreme Chandelle type which we have been able so far to see only in

an old government collection. Efforts are under way to obtain fresh seed specifically to study the possible genetic basis of its drought resistance.

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1. Field studies on hybridization and parallel variation in the wild relatives of maize in central Mexico.

Field studies of the wild relatives of maize in Mexico were begun during the fall of 1968. This field work is being undertaken in the following regions in which maize, teosinte and Tripsacum are all found growing in the same fields: Churintzio, Michoacan; Quiroga, Michoacan; Huetamo, Michoacan; Aguacate, Guerrero; Mazatlan, Guerrero; and Acachautla, Guerrero. In all these areas studied the fields were planted to maize, teosinte was wild around the margin of the fields and sometimes occurred as a weed in the fields, and Tripsacum was present within 100 yards of the field, either along stone walls or on rock outcroppings of a barranca. All of these sites are on limestone soils between 1350 and 1900 meters with the exception of Huetamo (600 m.). Although the data of the study are still in preliminary form, it is hoped that continued studies will yield field documentation on the mechanics of tripsacoid introgression via teosinte into maize and will explore the parallel variation found in Tripsacum, teosinte, and maize where the three occur together. [In the Balsas basin of Guerrero are found the most tassel-branched forms of maize, the most tassel-branched forms of teosinte (race Guerrero), and the most tassel-branched forms of Tripsacum (T. maizar). On the Central Plateau in central Mexico are encountered the maize plants with the most pronounced development of plant color, the most intensely colored teosinte race (race Central Plateau), and the Tripsacum species (T. pilosum and T. lanceolatum) with the most well-developed red plant color. There is also a parallel in the distribution of some of the most hairy forms of maize, teosinte, and Tripsacum on the Central Plateau.]