

## II. REPORTS FROM COOPERATORS

UNIVERSITY OF ARIZONA  
Tucson, Arizona

1. Studies on a stature mutant of maize, petite-one.

Measurements of the embryonic coleoptile length and embryo length of dwarf petite-1 are significantly less than those of the normal sib. Determination of cell number and cell size of the epidermis and cortical regions of the coleoptile and mesocotyl of the dwarf indicate the mutant has shorter cells but an equal number of cells as compared to the normal. The amount of ether extractable and diffusible auxin in four-day old coleoptiles of the dwarf is less than half of the amount obtainable from the normal sib. Differences in auxin content and cell size between the dwarf and normal seedlings can not be related to auxin inactivators, auxin inhibitors, gibberellins, amino acids or vitamins.

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1. Further studies of Guatemalan teosinte chromosomes.

Monajil of northern Guatemala. Microsporocytes of four plants of open-fertilized Monajil teosinte were cytologically examined. At pachytene, the chromosomes were in general well spread. Identifications of the gross structural characteristics of the chromosomes were made practically without any difficulty. The terminal knobs on the short arms of chromosomes 1, 3, and 7 were large in size. The terminal knobs on the short arms of chromosomes 9 and 8 were medium-sized. The long arms of chromosomes 4, 5, and 6 had a large terminal knob, but the short arms of these were knobless. The terminal knobs on the short arm of chromosome 2, and on the long arms of chromosomes 8 and 10 were small. The long arms of chromosomes 1, 2, 3, 7, and 9, and the short arm of chromosome 10 were without any knobs. All of these knobs were homozygous and