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Tropograph and Flectograph

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grazing interrupts the usual successions of plants, but wherever permitted the permanent climax of bunch-grass usual in the surrounding prairies takes possession and completes stabilization of the sand.

TROPOGRAPH AND FLECTOGRAPH

W. J. HIMMEL

The former is an instrument devised in the Laboratory of Plant Physiology of the State University of Iowa for recording the pull exerted by a plant giving a tropic response. It has so far been applied only to the case of a plant placed horizontally and attempting to bend upwards in response to gravity. As the stem raises very slightly an electrical contact is made and a shot dropped into a container attached to the end of the stem. Shots will be added singly at one-minute intervals until the plant is drawn back to its horizontal position, thereby breaking the electrical contact. An automatic recording device is attached to the dropping apparatus, giving a graph of the time when each shot is dropped. In this way the pull of the plant at excessive moments and the rate at which this pull accumulates is recorded. The Flectograph is used in recording the bending strength of stems or petioles.

GENETIC LINKAGE BETWEEN CHLOROPHYLL AND CAROTINOID PIGMENTS IN MAIZE

E. W. LINDSTROM

Genetic analysis of the inheritance of the pigments chlorophyll and carotin (and xanthophyll) in maize have demonstrated beyond reasonable doubt that these two groups of pigments are controlled by different genetic factors. Most of the genes for chlorophyll development are independently inherited of the yellow-producing gene, *l*. However, a case of linkage, involving this yellow factor and one of the three complementary genes responsible for chlorophyll development in the seedling stage of maize has now been discovered. These two linked genes w_2 and *l*, belong with the R-L-G linkage group, since they show typical linked inheritance, with approximately 21% crossing-over.