

grooves or none at all. In later types Nt is represented by faint or sharply defined streaks or bands. In many leaves, thus, well defined Nt can be seen side by side with a Nt recognizable only when the leaf is viewed against light.

Towards maturity soft, silky bristles develop on both dorsal and ventral surfaces of Nt. These bristles are thicker, longer and denser than those normally found on the leaf surface. Before drying of the plant blotches of pink colour appear on the Nt. These blotches turn brownish with drying.

Though the spatial position of a Nt on the leaf, from its inception to maturity, is stationary, in scattered cases Nt seems to "shift" upward towards the apex. It appears that Nt is carried upward with developing tissue. In a closely observed case a break in the band occurred at the point of initiation and Nt appeared well above toward the apex. A connection between the two was maintained by a thread-thin streak. It, therefore, is cogent to conclude that only a specified tissue zone is transformed to Nt and that the process of development is pre-defined.

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2. Character association of "Notched leaf of corn".

While investigating large populations for Nt, the frequency of some other plant characters in modified expressive forms was found to be significantly high. These characters, however, do not show a close linking with "visible" Nt. Four characters studied in detail are discussed below.

(A) Pollen production and sterility: Very poor pollen production in Nt populations was noted in the summer of 1968. Partial sterility of the pollen has also been noticed. Anthers, though well developed, fail to dehisce. Pollination with crushed anthers produced very few or no grains. In continuous self progenies the loss in pollen production has increased significantly. A tendency of "more notching - less pollen" is discernible in these families. A very poor seed set is obtained in hybridisation attempts. In hybrids involving Nt as a parent, the pollen production is normal.