

More mutants are needed to distinguish between these three explanations. Schwartz (published and unpublished data) has selected many ethyl-methane-sulfonate-induced Adh<sub>1</sub> alleles which are genetically transmissible and which specify subunits with altered net surface charges. These mutants specify certain charge transitions (e.g. the net loss of two negative charge units per subunit), but not others. The type of mutant required for explanation (2) to be correct has never been found, while that necessitated by explanation (3) is frequent.

Michael Freeling

In response to the interest expressed by a number of corn geneticists in kernel photography, the following article was contributed by the director of the Photographic Laboratory at Indiana University.

#### 5. Kernel photography.

Close-up color photographs of corn kernels with clear reproduction of patterns of color variegation may be obtained in the following way. A camera of the single lens reflex type is used with Ektochrome high speed film. The lens used for close-up work is a 48 mm Micro-Tessar lens. A five inch extension tube may be used to increase magnification slightly. Lighting from above and below gives a white background; without the light from below, the background is black. Polarizing filters are of utmost importance for avoiding glare from the surface of the kernel. Filters are placed in front of the lens, as well as on each of the light sources. The highlight reflections on the kernel may be used for focusing; they are then removed by turning the polarizing filters before exposing the film. Dust particles on the kernels should be removed with a static-master brush.

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