

7. Action of c_2 and Pr/pr.

Seeds of c_2 in pr were germinated under incandescent light. The aleurone of the triple mutant c_2 in pr developed a small quantity of red pigment, pelargonidin-3-glucoside. Also, the nonilluminated c_2 in pr seed had a faint red pigment (pelargonidin-3-glucoside) indicating that the Pr/pr gene might act before the c_2 gene in the gene action sequence.

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1. Protein electrophoretic patterns of maize, teosinte, and *Tripsacum dactyloides*.

Electrophoretic patterns of 70% ethanol extracts of ground seed of maize and teosinte are similar, but differ from that of *Tripsacum dactyloides*. The maize and teosinte bands have homologous migration velocities. The electrophoretic technique was similar to that of Johnson (1967). The nonspecific protein stain was naphthalene black.

Extract with 0.5 M NaCl (Paulis & Wall 1969) of maize and teosinte gave almost identical electrophoretic patterns, using Johnson's disc electrophoresis technique. There are at least 8 bands with homologous migration velocities. The maize and teosinte patterns are different from that of *T. dactyloides*. There is slight pattern variation among different races of maize and among different races of teosinte, but over all, teosinte does not appear to have any bands not found in maize. Primitive races of maize from Peru have similar patterns to primitive races of maize from Mexico.

Using this technique, the seed protein patterns of wild and cultivated diploid and tetraploid wheat, and wild and cultivated diploid and tetraploid cotton were shown to be almost identical (Johnson & Hall, 1965; Johnson, Barnhart & Hall, 1967; Johnson, 1967; Thein, 1967; Johnson & Thein, 1970). Even though more tropical species of *Tripsacum*