

1. Carbonic anhydrase activity in corn.

The rate of CO₂ evolution, as measured manometrically, was used as the index of carbon anhydrase activity. Etiolated normal and etiolated albino corn plants showed no significant activity. Light-grown albino corn plants showed substantial activity, usually equaling that shown by the green genotypes. Yellow seedlings ranged in activity from almost twice as high as green seedling to considerably less.

A certain pedigreed strain of Zea mays tested showed activity for yellow, green, and white seedlings, respectively, in the ratio of 1.7 to 1 to 0.4. Two other pedigreed strains showed activity for green and white seedlings, respectively, in the ratios of 5 to 6 and 3 to 5. The variation in carbonic anhydrase activity between similarly segregating strains is evidently under the control of independently assorting genes. Lack of chlorophyll in normal plants is not necessarily correlated with low carbonic anhydrase activity.

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