

CYCOCEL-INDUCED CHANGES IN ULTRASTRUCTURE OF LETTUCE
COTYLEDONS. A COMPARATION WITH THE GIBBERELLIN EFFECT.

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Lettuce seeds were imbibed in different concentrations of CCC: 2.5, 5 y 7.5 x 10⁽⁻³⁾M., GA₃: 10⁽⁻⁷⁾, 10⁽⁻⁶⁾, 10⁽⁻⁵⁾ M. or water (control) during 72 h. in darkness at 25±2°C. Etiolated seedlings were grown for 144 h. with a 12 h. photoperiod (7000 lux). Before electronic microscope analysis cotyledons were fixed with 3% glutaraldehyde in 0.1 M. Na-Cacodylate buffer (pH=7.4), postfixed in 2% OsO₄ and embedded in Spurr's resin.

The cotyledons of low conc. CCC treated plants contain chloroplasts with abundant starch granules and with reduced membrane growth. High retardant conc. produce: plastid vacuolation, disminution or absence of grana, poor presence of thylakoid membranes (sometimes only one membrane) and osmiophilic globules proliferation. Otherwise, organelles are rounder than those of control plants.

In GA₃ treatment plastid structures show a poorly developed membrane system and a smaller starch content. However organelle distribution is the same as in control. We found a lax chromatin in nuclei of hormonal treatments and very condensed chromatin in CCC treatment. Structural differences must be discussed in relation to previously reported variations.