



ENDOPOLYPLIIDY PATTERNS DURING DEVELOPMENT OF *CHENOPODIUM QUINOA*

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Patterns of endopolyploidy were studied in embryos and seedlings during early development. Relative nuclear DNA content was measured with DAPI staining and flow cytometry. Somatic tissue of *Chenopodium quinoa* (Chenopodiaceae) revealed extensive endopolyploidization; tissues comprised mixtures of cells with DNA content ranging from 2C to 16C in varying proportions. Endopolyploidy patterns corresponded to the developmental stage and the individual organ. Polysomaty was already present in the radicle of the embryo in the imbibited seed. During seedling development, endopolyploidization took place in many examined organs (roots, hypocotyls, cotyledons) to different extents. The C-value was highest in the differentiated root, where up to 50% of the cell underwent one or two endocycles. Endopolyploidization was not present in nuclei from leaves and the shoot apex.

Key Words: *Chenopodium quinoa*, endopolyploidy, flow cytometry, mean C-level, polysomaty.

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