



Morphogenetical aspects in *Helianthus annuus* l. during the ontogenesis

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Sunflower (*Helianthus annuus*) is annual plants native to Mexico and is valuable from economic, as well as from ornamental point of view. In this paper the edification of the primary and the secondary structure of the vegetative organs were followed during the ontogenesis. The root with primary structure is tetrarch, with four strands each of xylem and phloem that alternate with one another. In the secondary structure a massive of xylem could be observed in the central cylinder. The young stem has primary structure and circular shape in cross-section. The central cylinder is delimited by an endodermoid layer with starch grains. The vascular bundles are of collateral type, with an intense morphogenetic activity. The secondary structure is formed by only by cambium activity. It produces new vascular bundles, only with secondary structure, between the initial one. At the plant stem basis, a continuous ring of secondary xylem is present. Both in the stem with primary and secondary structure, secretory canals could be observed in cortex, pith and medullar rays. The petiole has semicircular shape, with small and large vascular bundles distributed on an arch. A continuous band of angular collenchyma is visible under the epidermis. The mesophyll of the leaf is formed only from by palisade parenchyma.