

Distribution of hydroxamic acids in zea mays tissues

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The hydroxamic acid content of leaves of cereals correlates well with resistance to aphids. In maize these compounds were absent from xylem exudates and guttation drops. Lateral veins of leaves of 7-day-old maize plants contained 8 mmol/kg fr. wt. while the entire leaf contained only 4.2 mmol/kg fr. wt. In leaves of 20-day-old plants, these amounts decreased by ca one-third. In mesocotyls, the cortex and central vascular cylinder contained 1.3 and 2.2 mmol/kg fr. wt, respectively. In 12-day-old wheat plants, the complete leaves and their veins contained 2.4 and 6.4 mmol/kg fr. wt respectively. Thus, the concentration of hydroxamic acid was always higher in the vascular bundles. © 1985.