

# Hydroxamic acid content in wild and cultivated gramineae

Zúñiga, Gustavo E.

Argandoña, Víctor H.

Niemeyer, Hermann M.

Corcuera, Luis J.

The content of two hydroxamic acids, 2,4-dihydroxy-1,4-benzoxazin-3-one (DIBOA) and 2,4-dihydroxy-7-methoxy-1,4-benzoxazin-3-one (DIMBOA), in cultivated and wild species of Gramineae was determined. *Zea mays* and *Triticum durum* contained both DIBOA and DIMBOA, the latter being in greater concentrations. *Secale cereale* and *Arundo donax* contained only DIBOA, while *Elymus gayanus* and *Chusquea cumingii* contained only DIMBOA. *Poa annua*, *Bromus unioloides*, *Dactylis glomerata*, *Phalaris canariense*, *Lolium perenne*, *Hordeum* species, *Setaria verticillata*, *Cynodon dactylon* and a *Sorghum* hybrid lacked these hydroxamic acids. The maximum concentration of hydroxamic acid in *A. donax* was found at the end of summer, and the minimum at the beginning of winter. In annual plants, such as wheat, while neither acid was found in the fruits, their concentrations in coleoptiles and leaves increased rapidly reaching a maximum 4 days after germination and decreasing gradually afterwards. DIBOA and DIMBOA had toxic