

Chemical constituents from shoots of *Hordeum vulgare* infested by the aphid *Schizaphis graminum*

Muñoz, Orlando

Argandoña, Víctor H.

Corcuera, Luis J.

Stress, pathogens or insects induce profound changes in the expression of the chemical constituents of plants. Some of these changes could be adaptations to the new conditions or the expression of new defensive characteristics. The purpose of this paper was to analyze the effect of aphid infestation on the composition of endogenous compounds, in barley leaves. Leaf waxes were obtained by washing with dichloromethane and remaining compounds were extracted with ethyl acetate and ethanol from homogenized leaves. The identification of compounds was done by combined capillary gas chromatography and mass spectrometry. Epicuticular compounds detected in barley after 6 days of aphid infestation were as follows (%): (1) 1-docosene (1.98), (2) 1-octadecene (2.07), (3) phytol (0.81). Epicuticular compounds in non-infested plants were (4) isophytol (0.83), (5) N-cyclohexyl-cyclohexanamine, (0.11) (6) 5-pentadecyl-1,3-benzenediol (2.10). In ethyl acetate extracts from infested plants the main compou