Increase in gramine content in barley infested by the aphid Schizaphis graminum R

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The kinetics of accumulation of gramine were measured in three aphid infested and non-infested cultivars of barley (Hordeum vulgare; cvs. Frontera, Libra and Acuario). After 6 days of infestation gramine content increased 10-fold in the cvs. Libra and Acuario, while in the cv. Frontera it only doubled. The maximum level found in infested cv. Acuario was 50% of the level observed in non-infested plants of the cv. Frontera. Therefore, in the cvs. Libra and Acuario gramine content is mainly an inducible response, while it is mainly constitutive in the cv. Frontera. This increase in gramine may be of significance in resistance to aphids.