Effect of Solanum glycosides on the aphid Schizaphis graminum

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Common Solanum glycosides were tested against a non-Solanum pest, the greenbug, Schizaphis graminum, fed by artificial diet supplemented with the tested compounds. In contrast with the potato aphid Macrosiphum euphorbiae, S. graminum is sensitive to both potato and tomato glycoalkaloids, as well as to all the different Solanum steroidal glycosides tested. S. graminum was less sensitive to glycoalkaloids than to the steroidal glycosides. Laxumin A (LC50 4.3 ?M) and laxumin B (LC50 6.1 ?M), isolated from Solanum laxum, were the most active of the tested compounds. The different sensitivity of both aphids against Solanum glycosides could be related to a possible adaptation of the insects to their host plants secondary metabolites.