

Effect of cysteine on stability and toxicity to aphids of a cyclic hydroxamic acid from gramineae

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Toxicity of DIMBOA, the major cyclic hydroxamic acid in maize extracts, to the aphid *Schizaphis graminum*, was decreased by addition of cysteine to the insect diet. The LD_{50} for DIMBOA on aphids was, after 24 hr, 2.1 and 0.9 mM in diets with and without added cysteine, respectively. DIMBOA decomposed 1.5 times faster in diets or buffer with added cysteine. Decomposition products of DIMBOA (4 mM) in insect diets with or without added cysteine were not toxic. It is suggested that the observed variations in toxicity of DIMBOA are a consequence of differences in its rate of disappearance from the diet. © 1982, All rights reserved.