

Title Deltamethrin resistance in *Rhyzopertha dominica* (F.) (Coleoptera: Bostrichidae) in Brazil.  
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#### **Abstract**

Samples from some uncontrolled and other populations of *R. dominica* were collected to investigate the extent of their tolerance to deltamethrin. Eleven strains were bioassayed with deltamethrin using the standard FAO method for resistance to pesticide and wheat grain as food. Ten strains, originating from Rio Grande do Sul, Brazil, were designated BR1 to BR10, and one originating from the UK was designated UK1. The evaluation of tolerance to deltamethrin revealed two very resistant strains, BR6 and BR7, and two susceptible strains, BR4 and UK1, whereas the remaining strains showed intermediate tolerance. Selection pressure (deltamethrin insecticide applied in the laboratory for 21 generations) increased the resistance of BR7 strain by 29 937-fold.