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Insecticide Resistant Strains of House Flies (*Musca domestica*) Show Limited Cross-Resistance to Chlorfenapyr

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Abstract:

The toxicity of chlorfenapyr was evaluated against susceptible and pyrethroid resistant strains (laboratory and field collected) of house fly (*Musca domestica* L.). In one laboratory strain no cross-resistance was detected, 2.3-fold cross-resistance was detected in another strain, and a 2-fold negative cross-resistance was found in two strains. In field collected populations cross-resistance levels were also low (1.2- to 1.6-fold). These results suggest that the initial utility of chlorfenapyr for house fly control would not likely be compromised by cross-resistance, and that not all strains that have enhanced monooxygenase-mediated resistance will have negative cross-resistance to chlorfenapyr. The P450 isoform responsible for the activation of chlorfenapyr is discussed.

Keywords:

negative cross-resistance, cytochrome P450 monooxygenases



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