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棉铃虫对甲氨基阿维菌素苯甲酸盐的抗性遗传力

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Realized Heritability of Resistance to Emamectin Benzoate in *Helicoverpa Armigera* (Hübner)

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摘要 为了评估棉铃虫对甲氨基阿维菌素苯甲酸盐的抗性风险，在室内进行了棉铃虫对该药剂的抗性选育和现实遗传力分析。连续用甲维盐对棉铃虫选育25代，与同源对照种群相比，获得抗性倍数为2.974倍的汰选种群。采用阈性状分析方法，获得棉铃虫对甲维盐的抗性现实遗传力(h^2)为0.05218。进一步预测其抗性发展速度，假设以90%致死率继代处理棉铃虫，其抗性达到5倍、10倍分别需要18.67代和26.71代。

关键词： 棉铃虫 甲维盐 抗性风险 抗性选育 现实遗传力 抗性倍数

Abstract： In order to evaluate the resistance risk of *Helicoverpa armigera* to emamectin benzoate, the resistance selection and realized heritability of *H. armigera* were analysed in the laboratory. The insecticide-treated population developed 2.974-fold resistance to the insecticide comparing with the homologous control population, after 25 generations of resistance selection with emamectin benzoate. Realized heritability(h^2) of resistance in selection stages was evaluated based on the Tabashnik ' s methods. The results showed that h^2 for the entire selection experiment was 0.05218. To predict the development of resistance, it required 18.67 and 26.71 generations of *H. armigera* to obtain 5-fold and 10-fold increase of emamectin benzoate in LC50 under selection pressure at 90% mortality for each generation of selection.

Keywords： *Helicoverpa armigera* emamectin benzoate resistance risk resistance selection realized heritability resistance ratio

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