

研究论文

七种糕点赤拟谷盗(鞘翅目: 拟步甲科)感染的抗性 (英文)

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摘要 Seven biscuit types namely, Okin, Digestive, Cabin, Peanut, Cream crackers, Hobnobs and Glucose and wheat flour were screened for their resistance to *Tribolium castaneum* (Herbst) at ambient temperature of 28 ± 2 °C and $78 \pm 2\%$ relative humidity in the laboratory. 50 g of each biscuit sample were infested with four female and two male adult beetles and left for 15 days then remove for a resistant experiment and 70 days for a mortality experiment. Each treatment and the control without beetles were replicated three times. Results showed that there was significant difference ($P < 0.05$) in the mortality rate of *T. castaneum* in the biscuit types and wheat flour samples, while there was no significant difference ($P > 0.05$) in the weight loss of biscuit types. The highest adult mortality of beetles (100%) was obtained from Peanut biscuits at 28 days after infestation while there was only 5.5% adult mortality in wheat flour at 70 days after infestation. The susceptibility index was 0 for all the biscuit types since there was no adult emergence indicating that they were resistant to *T. castaneum* infestation. Resistance in the biscuit types could be due to chemical additives (e.g. sodium chloride and sodium bicarbonate) used in the production of biscuits, which may have inhibitory effect on the development of *T. castaneum* and also the low moisture content of the biscuits. Packages that can easily be perforated or damaged to allow absorption of moisture from the environment should not be used in packing biscuits.

关键词 [Tribolium castaneum](#) [感染](#) [死亡率](#) [易感指数](#) [糕点重量损失](#)

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