

研究报告

应用球孢白僵菌菌条持续控制松褐天牛效果的分子评价

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摘要 采用 I 型内含子技术对应用球孢白僵菌无纺布菌条持续控制松褐天牛的防治效果进行了分子生物学评价。结果表明: 采用常规手段评价防治效果, 两个处理区的防治效果分别为 19.5% 和 10.8%; 而采用分子手段进行评价, 防治效果分别为 14.2% 和 11%。证明常规评价以死亡率或侵染率来计算微生物防治效果, 难以排除当地微生物区系中的土著菌株所造成的侵染死亡, 而采用分子生物学手段进行防治效果评价可从一定程度上消除土著菌株的干扰, 较准确地反映人工放菌的防治效果。

关键词 [球孢白僵菌](#) [无纺布菌条](#) [松褐天牛](#) [分子评价](#)

分类号

Molecular evaluation on the efficacy of sustainable control of *Monochamus alternatus* by non-woven fabric fungal bands impregnated with *Beauveria bassiana*

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Abstract

By using molecular marker of group I intron, a field evaluation was made on the efficacy of sustainable control of *Monochamus alternatus* by non-woven fabric bands impregnated with *Beauveria bassiana*. The results showed that the control efficacy in two treated plots was 19.5% and 10.8%, and 14.2% and 11% when evaluated with conventional and molecular evaluation methods, respectively, suggesting that the conventional method which evaluated the control efficacy in terms of microbes mortality or infection rate couldn't distinguish the efficacies caused by released biocontrol agents and indigenous pathogens, while molecular method could avoid the interference of indigenous pathogens and give an objective and reasonable evaluation on the efficacy of microbial control.

Key words [Beauveria bassiana](#) [non-woven fabric fungal band](#) [Monochamus alternatus](#) [molecular evaluation](#)

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