

不同生物型棉蚜对夏寄主葫芦科作物的选择

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摘 要

于2008、2009年连续两年采用模拟田间自然扩散法,系统地研究了棉花型棉蚜和甜瓜型棉蚜有翅蚜对11种夏寄主的选择性。结果表明,棉花型棉蚜对杂交葫芦、小西葫芦表现出强选择性及适应性,而对香瓜、黄瓜、西瓜及甜瓜均不选择,或即使选择其若蚜在其上也不能存活;甜瓜型棉蚜对甜瓜、香瓜、南瓜、黄西葫芦、大西葫芦、杂交葫芦等均表现较强选择性,而对棉花及小西葫芦表现不选择。但是,甜瓜型棉蚜在小西葫芦上也能产若蚜并存活。从而证明小西葫芦是两种寄主型棉蚜的共同寄主,有可能成为两者相互转换的桥梁寄主。

Abstract

The cotton or melon aphid, *Aphis gossypii* (Glove), is one of the most important pests worldwide. The species has at least two specialized biotypes, one on cotton (*Gossypium hirsutum*), and one on cucurbitaceous plants. In this study, we determined the preference and the finite increase rates of *A. gossypii* on 10 host plants of Cucurbitaceae with winged adults. *A. gossypii* adults originally from cotton significantly preferred two cucurbits, hybrid squash (*Cucurbita* sp.) and zucchini (*Cucurbitapepo zucchini*), to other host plants; whereas *A. gossypii* adults originally from melon (*Cucumis melo*) preferred cucurbit plants, including melon, cantaloupe (*Cucumis meloinodorus*), pumpkin (*Cucurbita moschata*), yellow squash (*Cucurbita pepo*), tornado (*Cucumis melo "tornado"*), and hybrid squash (*Cucurbita* sp.) to cotton and zucchini. Interestingly, the aphids originally from melon did not prefer zucchini, but they could survive on this host well. Therefore, zucchini could be an intermediate or the mutual host of the two aphid biotypes, and they might be serving as a bridge host of the two biotype aphids.

其他相关研究

[昆虫 RNAi 技术与方法](#)，《应用昆虫学报》2013 年 05 期

[茴香薄翅野螟越冬幼虫过冷却点与相关生化指标分析](#)，《西北农业学报》2014 年 02 期

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