Article

Effect of the cassava green mite, *Mononychellus progresivus*, on the development and reproduction of the introduced predatory mite, *Phytoseiulus longipes* (Acari: Tetranychidae; Phytoseiidae), at different temperatures

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Abstract

The cassava green mite (CGM), *Mononychellus progresivus* Doresta allowed for a limited development of the predatory mite, *Phytoseiulus longipes* Evans at three experimented temperatures. When the predators were confined with the motile stages of CGM, at 10°C, only 10% of the larvae reached maturity after 16 days. At 24 and 32°C the development on the same prey was improved, however less than 50% that reached maturity, were not able to produce eggs. At the same temperatures, on the tomato spider mite (TSM), *Tetranychus evansi* Baker & Pritchard, the developmental periods of *P. longipes* were shorter and mortality lower. *P. longipes* consumed less number of CGM when compared to TSM and about double the number of TSM prey when compared to CGM. Feeding only on CGM produced insignificant number of eggs with high rate of female mortality. Combination of both CGM and TSM at different ratios substantially improved reproduction and lowered mortality of *P. longipes* females.

Key words: Acari, Phytoseiidae, *Phytoseiulus longipes, Mononychellus progresivus*, life cycle, reproduction.

Introduction

The predatory mite, *Phytoseiulus longipes* Evans, was described from Zimbabwe (Evans, 1958). Later, it was reported from other localities e.g. Cape Province, South Africa; Rio Grande do Soul, Brazil; Los Andes, Chile (Kanouh, 2010). This predatory mite is able to develop and reproduce on different species of spider mites such as *Tetranychus urticae* Koch, *T. evansi* Baker & Pritchard and