

# Potencial de Depredación de *Cryptolaemus montrouzieri* Mulsant Hacia *Planococcus citri* Risso

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## Abstract:

*Cryptolaemus montrouzieri* Mulsant (Coleoptera: Coccinellidae) is an important predator of *Planococcus citri* Risso (Hemiptera: Pseudococcidae), an important citrus pest. Its use to control this insect pest has been considered a valuable tool because other biological control methods have been ineffective due to the waxy coat that covers insect body in addition to its feeding habits. The objectives of this work were the evaluation of predatory ability and predatory efficiency of *C. montrouzieri* toward *P. citri*. A colony of *P. citri* was established using pumpkins as a natural diet and crawlers to initiate each generation. A colony of *C. montrouzieri* was established using adults reared inside plastic cages containing pumpkins infested with ovisacs of *P. citri*, for feeding and oviposition. Newly hatched larvae were reared on fresh pumpkins infested with any stage of *P. citri* to continue the life cycle. Both colonies were maintained under controlled environmental conditions. To determine predatory ability and predatory efficiency, confrontation bioassays were conducted in Petri dishes, using first-instar larvae (L1), third-instar larvae (L3), and adults of *C. montrouzieri* against first-instar nymphs (N1), second-instar nymphs (N2), third-instar nymphs (N3), and females of *P. citri*. In all treatments, five individuals of *C. montrouzieri* of each stage were confronted with 0.1 g of *P. citri* of each stage. Number of individuals of *P. citri* ingested by *C. montrouzieri* was obtained by the difference between the initial and the final individual numbers. Results indicated that predatory ability and efficiency of *C. montrouzieri* were different and varied according to its developmental stage and that of its prey. The *C. montrouzieri* adult was the most predatory and efficient stage compared to the other developmental stages. L3 had a similar predatory efficiency than adults and L1 preyed on significantly fewer *P. citri* individuals, exhibiting also the lowest predatory efficiency against females than any other *C. montrouzieri* stage. Predatory activity of *C. montrouzieri* increased with insect development and each stage showed noteworthy predatory efficiency.