

PREFERENCE AND POTENTIAL OF DIFFERENT PREYS IN MASS PRODUCTION OF THE PREDATORY MITE *PHYTOSEIULUS MACROPILIS*

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Abstract

The applied biological control consists of the inundative release of natural enemies on the attacked plants aiming at immediate reduction of pests. Control agents or natural enemies are created in mass in the laboratory and are periodically released on a large scale, helping to decrease the use of conventional insecticides and acaricides. For production of the predatory mite *Phytoseiulus macropilis*, it is necessary to multiply the pest (generally a phytophagous mite of the same species that is targeted for control in the field) in host plants. For the production of these beneficial microorganisms to be viable, they must be multiplied in large numbers with low cost and time. Thus, it is necessary to establish a production system for host plants, phytophagous mites and predatory mites, which can be an expensive process in a biofactory. One way to optimize production is to evaluate the oviposition potential of predatory mites when fed with different prey. In this sense, the objective of this work was to evaluate the acceptance and select the best food to guarantee high production of the predatory mite. The number of eggs laid by adult females of the predator *P. macropilis* when fed with the two phytophagous species (the two-spotted spider mite *Tetranychus urticae* and the red mite *Tetranychus ludeni*) during 24 hours was evaluated. There was no significant difference in egg production of female predators when fed with different phytophagous species ($z = -0.211$; $DF=1$; $p=0.833$). In the treatment in which the two-spotted mite was used as food, the average number of eggs was 2.09, while in the treatment with the red mite it was 1.91, both evaluated after 24 hours. Therefore, the results obtained allow us to infer that the predatory mite *P. macropilis* does not have a considerable difference in its reproductive potential in relation to the two different prey species tested.

Keywords

Applied Biological Control, Predator Mite, Phytoseiidae.