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MODELING HOST-PARASITOID INTERACTION IN THE SYSTEM DIAPHORINA CITRI-TAMARIXIA RADIATA ON MURALLA PANICULATA

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Abstract

Starting by periodic samplings of the psillido Diaphorina citri and their parasitoide Tamarixia radiata in plants of Murraya paniculata, the maximum capacity of increment and intrinsic rate of reproduction were calculated in field, using the logistical pattern and the dynamics was simulated by means of the mentioned models, being compared the obtained results. This new interaction model intended Host-Parasitoide. The models applied in this work are able to simulate the dynamics in both populations but they assume a parasitoid limited fecundity and limited range of search, when not including a relationship between the insects with the cultivation phenology and the incidence of the climatic factors on the densities of host (D. citri) it's parasitoid (T. radiata). The dynamics simulated by the proposed pattern showed that just as it predicts the logistical model, the population of the host it falls, moment in which the population of the parasitoide is increased. This model is able to simulate a growth of both populations, when including the intrinsic rates of increment under field conditions, a level of more prediction is achieved that the one derived of the models that include the rate of maximum fecundity obtained under laboratory conditions. Intends to be carried out a model of logistical growth before trying to simulate the populational dynamics so we can know the maximum capacity of increment in these populations' at the studied ecosystem and the intrinsic rate of increment to be an employee in other prediction models.

Key Words : *Diaphorina citri, Tamarixia radiata, interaction host- parasitoids, logistical model.*

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