

**TEMPERATURE EFFECT ON THE FITNESS AND *Wolbachia* TRANSMISSION IN *Trichogramma pretiosum*.
EFEITO DA TEMPERATURA SOBRE O “FITNESS” E A TRANSMISSÃO DE *Wolbachia* EM *Trichogramma pretiosum*.**

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Wolbachia bacteria have been found in about fifteen *Trichogramma* species. It's presence causes different types of reproductive modifications in the host. In Brazil, complete parthenogenesis (thelytoky) was recently detected in two *Trichogramma* species (*T. atopovirilia* and *T. pretiosum*) by using *Wolbachia* specific primers (*wsp*) for DNA amplification. Here we evaluated the reduction of *Wolbachia* transfer from mother to daughter and the fitness in *T. pretiosum* due to temperature effects. *T. pretiosum* (strain TESC) was collected in Santa Catarina State, Brazil. About 400 *E. kuehniella* eggs attached to an egg-card were offered to single female wasps reared in a gel capsule provided with a droplet of honey. The study was carried out at three different temperatures (20, 25 and 30°C), 70% of RH and 14:10 (L:D). The longevity, percentage of emergence, parasitism rate, and sex ratio of *T. pretiosum* were analysed for the first 10 days of their life. The data were analysed using a completely random design with three treatments and 20 replications. The data were submitted to analysis of variance and the means compared by Tukey test ($P \leq 0.05$). Results showed that the higher the temperature the lower the longevity. The mean percentage of wasps emerged during the first 10 days was highest at 25°C. *T. pretiosum* parasitism was not affected at 25 and 30°C. However, at 30°C *Wolbachia* transmission strongly decreased resulting in a sex ratio of 57% females on the 4th day and without production of females on the 9th day. At 20 and 25°C the mean sex ratio was not smaller than 0.99.

Keywords: Parasitoid, parthenogenesis, *Wolbachia*