Camparison of age-specific functional response in two strains of *Trichogramma brassicae* (Hymenoptera: Trichogrammatidae)

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The parasitoid, *Trichogramma brassicae* Bezdenko is used for inundative release in biological control programs against lepidopteran pests in agroecosystems. This egg parasitoid displays two reproductive modes, arhenotoky (bisexuality) and thelytoky (unisexuality). Thelytokous forms are related to the presence of endosymbiotic *Wollbachia* bacterium. In this study, age-specific functional response of these two populations to different egg densities (*Hymenoptera: Trichogrammatidae*) at 25 ± 1°C, 60 ± 5% RH and 16:8 (L:D) photoperiod were compared. These densities were presented to a single mated female of *Trichogramma brassicae* (1 day old). It was replicated 10 times. The egg densities were replaced everyday until the end of parasitoid life. Data analysis was done for the first five days of parasitoid life to determine the type of functional response and its parameters. The type II functional response was obtained for the 1 and 2 day old females, and type III for 3 to 5 day old ones of both thelytokous and arhenotokous strains. Searching efficiency for first and second day old of thelytokous strain were 0.0528 ± 0.0092 and 0.0489 ± 0.0225 h⁻¹, and for arhenotokous were 0.0724 ± 0.0274, 0.1162 ± 0.0573 and 0.0891 ± 0.0426 h⁻¹, respectively. Handling time (*Tᴾ*) for *Wollbachia*-infected wasps for 1 to 5 day old females were 0.4529 ± 0.0925, 0.4691 ± 0.0655, 3.7765 ± 1.1106 and 3.7527 ± 0.4394 h⁻¹, respectively. Also, *Tᴾ* for bisexual wasps at 1 to 5 day old females were 0.5780 ± 0.0599, 2.1964 ± 0.1949, 2.2315 ± 0.1602, 2.5580 ± 0.2069 and 2.5859 ± 0.2307 h⁻¹, respectively, suggesting that handling time in infected strains (thelytokous) is higher than uninfected strains.

**References**