

## عنوان مقاله:

Does Wolbachia Change Diapause and Energy Reserves of Trichogramma brassicae in Response to Light ?Wavelengths

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#### خلاصه مقاله:

The present study examined the light wavelengths effect on the diapause percentage of progeny and energy reserves of maternal generation in sexual and asexual Trichogramma brassicae that had been reared under different light wavelengths before oviposition. Photoperiod has a maternal effect on the diapause induction in Trichogramma wasps; however, the light wavelengths effect on their diapause has not been studied. In this study, we reared the maternal generation of both strains under five light wavelengths including blue (F۵Δ~FYΔ nm), green (Δ1Δ~ΔΨΔ nm), orange (ΔΛΔ~Δ۹Δ nm), red (FYo~FP" nm), and white (Δ,ooo~10,ooo K), and allowed YF hours old females to oviposit in Ephestia kuehniella eggs. The diapausing generation was placed at 10°C and absolute darkness for two months. The results showed that Wolbachia infection and light wavelengths had significant effects on the diapause percentage and energy reserves of T. brassicae, excepting glycogen contents. The maximum and minimum diapause percentage was observed under green and white light in asexual, and under white and green light in sexual strain. The data showed that the sexual strain had lower lipid and protein levels than the asexual strain, except when exposed under white light. The diapause percentage in the sexual strain was higher than in the asexual strain under all light wavelengths, and the reaction of parasitoids toward light wavelengths was different in the two strains. Therefore, Wolbachia can cause a different reaction to light wavelengths in both diapause percentage and pattern of the parasitoid. These results should be considered to improve mass-rearing and long-term storage of this parasitoid

## کلمات کلیدی:

بی کرد. Egg parasitoid, Mass-rearing, Maternal effect, دیاپوز, پارازیتویید تخم, ذخایر انرژی, طول موج, ولباکیا

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