

The pre-oviposition of female adults was extended, the average egg number per female showed a downward trend, the longevity of adults gradually shortened, and the ratio of female to male offspring increased as temperature increments were increased. *Bactrocera tau* (Walker) (Diptera: Tephritidae) is an economically important invasive pest, that is capable of seriously reducing the quality and yield of vegetables and fruits, it was first recorded from Fujian province in 1849 and later introduced to Yunnan province in 1912 as a result in trade fruits and vegetables of China. In recent years, with the onset of global climate change and the accompanying increase in the greenhouse effect, elevated climatic temperatures have become one of the main environmental factors affecting growth and reproduction in insects, and the optimal developmental temperature of *B. tau* was found to be from 25 °C to 31 °C, the growth, development and reproduction of *B. tau* are normal under the optimal temperature conditions. The results showed that the survival rate of *B. tau* gradually decreased in all stages following exposure to short-term high-temperatures.