Effects of soil texture and burial depth on the biological parameters of overwintering pupae of Bactrocera oleae (Diptera:Tephritidae)

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This study investigates the effect of soil texture and pupal burial depth on some selected bio ecological parameters of Bactrocera oleae (Diptera: Tephritidae), as one of the major pests of the olive tree. Thus, we focused on the emergence rate of adult flies, the duration of pupation and the parasitism rate by Psyttalia concolor (Hymenoptera: Braconidae). The three types of soils determined (clay, sandy-loam and Sandy-Clay-Loam) were tested at 6 depths ranging from 2 to 16 cm. The results have showed that the duration of pupation, the emergence rate and the postnatal mortality of this pest are influenced by the soil texture and the burial depth of its pupae. Regarding sandy-loam soil, we obtained an average emergence rate of 46.31%, whereas in the clay soil and Sandy-Clay-Loam soils this rate was about 38%. The post-emergence mortality rate was higher in the clay soil, at 16 cm depth. The duration of pupation ...

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