

Biology and fertility life table of the South American fruit fly *Anastrepha fraterculus* on grape

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Abstract

The South American fruit fly *Anastrepha fraterculus* (Wiedemann) (Diptera Tephritidae) was grown in the laboratory on two different table grape cultivars, 'Italia' (*Vitis vinifera* L.) and 'Niagara Rosada' (*Vitis labrusca* L.). In 'Niagara Rosada', oviposition occurred but larvae did not develop. In 'Italia', the duration in days (mean \pm SE) and viability (%), given in parentheses) of the egg, larval and pupal stages were 3.01 ± 0.04 (61.75%), 21.95 ± 0.33 (8.25%) and 14.60 ± 0.09 (65.10%), respectively. The duration of the egg-to-adult period was 39.10 ± 0.45 days and the viability was 3.28%. The pupal weight was 15.10 ± 0.31 mg with a sex ratio (male:female) of 0.64. The pre-oviposition period was 11.77 ± 0.58 days with an average of 129.47 ± 16.38 eggs per female. Oviposition puncture resulted in two injuries to the skin of the 'Italia' grapes. Through the fertility life table, the net reproductive rate (R_0) and finite rate of increase (λ) were 1.71 and 1.01, respectively. The grape cultivar 'Italia' allowed *A. fraterculus* to complete its life cycle and is considered a host for this pest.

Key words: Vitaceae, *Vitis vinifera*, *Vitis labrusca*, vineyard, damage, fruit fly, *Anastrepha fraterculus*.

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