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Population Parameters of Tetranychus cinnabarinus Boisduval (Prostigmata: Tetranychidae) on Eight Strawberry Cultivars

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Abstract: Development times, reproductive rates, and population growth parameters of Tetranychus cinnabarinus Boisd. on 8 strawberry (Fragaria x ananassa Duchesne) varieties were evaluated under laboratory conditions. Total development times of immature males and females were not significantly influenced by the strawberry varieties. T. cinnabarinus laid significantly more eggs per day on cultivar Muir (8.46) than on the other cultivars. Similarly, T. cinnabarinus on Muir had the highest net reproductive rate (R_o) (120.19 F/F), while R_o was the lowest on cultivar Sweet Charlie (39.51 F/F). The generation time ranged from 18.96 to 22.32 days, but no significant varietal effect was seen. The intrinsic rate of increase (r_m) showed a pattern similar to that of R_o ; it was highest on Muir (0.253) and lowest on Sweet Charlie (0.208). The results indicate that Muir was the most favorable strawberry cultivar for T. cinnabarinus population growth, whereas Sweet Charlie was the least suitable, under controlled conditions.

Key Words: Tetranychus cinnabarinus, strawberry, life tables

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