Response of *Tetranychus cinnabarinus* Feeding on NaCl-stressed Strawberry Plants

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The development and reproductive rates of *Tetranychus cinnabarinus* Boisduval (Acari: Tetranychidae), the carmine spider mite, were studied on two strawberry cultivars (*Fragaria* x *ananassa* Duch.; 'Camarosa' and 'Sweet Charlie') at three NaCl concentrations, 1760, 2400 and 3040 mg l^{-1}, and control. The effects of NaCl application on the contents of plant nutrients, chlorophyll, proline, peroxidase activity (POX) and proteins were assessed. On Camarosa, *T. cinnabarinus* had a faster development rate with applications of NaCl than without, except for female development at the highest salinity level. The total development time of females increased with the NaCl concentration, whereas total development time of males decreased. The oviposition period and female longevity on Camarosa was significantly longer in the control than with NaCl, whereas daily and total fecundity were significantly higher at all NaCl concentrations than in the control, except for total fecundity at the lowest salinity level. The total development time, oviposition period, female longevity, daily and total fecundity on Sweet Charlie did not differ significantly between NaCl salinity levels and the control. The intrinsic rate of natural increase (r_m) on Camarosa and Sweet Charlie were significantly higher with NaCl than in the control. However, the contents of Na, Cl, P, chlorophyll, proline, POX and protein in the two strawberry cultivars changed depending on NaCl concentration. On the other hand, the K and N contents were not affected significantly by NaCl salinity.

KEY WORDS: Intrinsic rate of increase; life history; salinity; salt stress; strawberry; *Tetranychus cinnabarinus.*

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