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The effect of fruit fly larval density on some quality parameters of mango

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ABSTRACT

Objective

Three varieties of mango, Jaffna, Palmer and Kent were infested with different first instar larval densities (10, 20 and 30) of the invasive fruit fly species, *Bactrocera invadens* to determine the effect of each of the densities on three fruit quality parameters.

Methodology and results

The parameters assessed included Total soluble solid (TSS), Percentage titratable acidity (% T.A) and pH. The shelf-life

was determined as the period from the first day of treatment until signs of damage were observed. TSS and pH showed decreasing trends while % T.A. increased over time. In the controlled treatments where fruits were either held intact or punctured but with no introduction of larvae, there was an increase in pH and TSS and a decrease in %T.A. with regard to shelf-life, the three varieties infested with 10 larvae lasted up to 6 days, while fruits infested with 20 and 30 larvae lasted for 3 days. The shelf life of the controlled treatments for all the varieties lasted till the 15th day.

Application of findings

These findings have potential applications in postharvest treatment strategies for mangoes.

Key words

Bactrocera invadens, larval infestation, Total soluble solid, Percentage titratable acidity, pH