Amino acid sprays on mango (Mangifera indica L.) yield and quality

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Farmers of the São Francisco River Valley (Brazil) have been spraying amino acids on mangoes with the objective to increase panicle length and improve fruit retention and quality. This study tested the effect of spraying amino acids at concentrations of 0.0%; 0.02 %; 0.04% and 0.06 %, on mango plants, cv Tommy Atkins, at budding phase (panicles with 5 cm), at fruit set and during fruit growth (5 cm diameter). It was carried out from June to October, period of natural harvest in the region. Appropriate management of nutrition, water and growth regulators, besides climatic conditions, mainly temperature and solar radiation, could explain no statistical differences among treatments regarding panicle length and fruit production. Characteristics of fruit quality during storage (23.8 ± 2.8 °C and $45 \pm 8\%$ RH), as weight loss, total soluble solids, total titratable acidity and pulp firmness were not significantly affected by amino acid spraying. Changes on those variables were registered as a consequence of fruit ripening. Amino acids sprays lightly delayed the evolution of skin luminosity and °Hue of pulp, but the differences could not be visually identified. The doses of amino acids were not efficient for improving the natural concentrations of these substances in the leaves; which could explain the non significant effects on the variables analyzed.