

### Abstract:

In order to study the brown spots in 'Tommy Atkins' mangoes, fruits grown at Ipanguassu, Brazil were harvested and stored at 12 °C for a period of 19 days and then evaluated for cuticular permeability. Fifty circle-like pieces, with 1.39 cm diameter and 1.52 cm<sup>2</sup> area were obtained from red and green parts of the peel of both affected and non-affected mangoes and placed on polystyrene moulds over Petri dishes containing 5 mL of distilled water. Petri dishes were weighed at one-hour intervals and the amount of water lost was expressed as mg/cm<sup>2</sup>/h. The evaluation of cuticular permeability was made by comparison with different samples, with a Petri dish plus polystyrene being used as control. After cold storage, 'Tommy Atkins' mangoes cuticular permeability showed a tendency to decrease following for both healthy and spotted fruits after. The microscopic images of 'Tommy Atkins' mangoes show that symptoms that are seen as brown spots in the peel did not appear at the outer cellular strata and were not caused via cuticle injuries.