

## **Effects of fruit canopy position on chemical composition and fruit colour development of starfruit cultivated under netted structure.**

### **Abstract**

The effects of fruit canopy position on chemical composition (SSC, ascorbic acid, carotenoid concentrations) and colour development of starfruit (*Averrhoa carambola*) under netted structure, were determined. The treatments consisted of three canopy positions: fruits facing the morning sun, fruits facing the evening sun and fruits under the canopy. The fruit canopy position did not significantly ( $p < 0.05$ ) influence the fruit SSC. Exposure to irradiance increased the ascorbic acid concentration of starfruit. The carotenoid concentration increased with heat units and exposure to irradiance (PAR) indicating that irradiance might play an important role in the synthesis of carotenoid. Excessive irradiance (exposed fruits) resulted in lower  $L^*$  value, and darker green fruits with less shine. Fruits protected under the plant canopy had better cosmetic appearance and are suitable for export market.

**Keyword:** *Averrhoa carambola*; Canopy position; Microenvironment; Chemical composition; SSC; Ascorbic acid; Carotenoid; Fruit colour.