

Title Light, temperature, and sucrose affect color, diameter, and soluble solids of disks of wax apple fruit skin.

Authors Shu, Z. H., Chu, C. C., Hwang, L. J. and Shieh, C. S.

Citation HortScience Vol: 36 (2001); 279-281

Abstract

A study was conducted to assess the combined effects of light, temperature and sucrose on colour, weight, diameter and soluble solids of the skin of wax apple (*Syzygium samarangense*) cv. Pink fruits. Skin discs were cultured in a factorial arrangement of two light levels (dark or light at 300 micro mol m⁻² s⁻¹) as subplots, and three sucrose concentrations (0, 3, or 6%) as sub-subplots, within three temperature levels (20, 25 or 30 deg C) as whole plot treatments. Weight, diameter, soluble solids concentration (SSC) and anthocyanin content were measured 2 weeks after incubation. Light increased SSC and anthocyanin, but reduced the increase in weight and diameter. Increasing the temperature limited increase in diameter and anthocyanin content. Weight, SSC and anthocyanin contents increased in a linear fashion with concentration of sucrose in the culture solution. However, none of the three factors played a unique role in anthocyanin synthesis in wax apple. Among the 18 combinations, light/20 degC/6% sucrose gave the highest SSC and anthocyanin content, while dark/20 deg C/6% sucrose produced the largest diameter.