

Abstract:

The colour of 'Hort16A' (Gold kiwifruit - *Actinidia chinensis*) and the way this colour develops holds key fruit maturity information. Present methods of measuring colour use laboratory chromameters that are too expensive for packhouses, yet there is a strong need for packhouses and growers to monitor the colour development of their fruit. The use of colour charts has had limited success due to the subjectivity of the classification. Computer colour scanners, which seem to have some potential for this task, might fit well into pack house laboratories and could provide rapid assessment of fruit colour on batches of up to 15 fruit at a time. We investigate the use of such low cost computer scanning systems for 'Hort16A' colour measurement. The major difficulty is that scanners are designed to measure images built up from mosaics of a few coloured inks, and when used for the assessment of 'natural' objects it is necessary to resort to special calibrations using large numbers of test objects. We show that paint charts or even sophisticated laboratory colour charts give very poor calibrations when used for measuring fruit colour. This paper discusses the theory of colour as it applies to the assessment of kiwifruit colour and the effectiveness of synthetic colour standards for calibration of kiwifruit colour assessment systems using computer scanners.