

Title Orchard cooling with overtree sprinkler irrigation to improve fruit color of 'Delicious' apples.
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Abstract

The influence of supplemental sprinkler irrigation on fruit colour of 'Oregon Spur Delicious' (Trumdor) apples *Malus domestica* [*Malus pumila*] was evaluated in the area of Lleida (NE Spain) over a 3-year period (1992-94). Cooling irrigation was applied for 2 hours daily for 25-30 days preceding the harvest. Three treatments were evaluated: (1) control without overtree sprinkler irrigation; (2) sprinkler irrigation applied at midday; and (3) sprinkler irrigation applied at sunset. Fruit colour was significantly affected by the cooling irrigation and also by the weather of the particular year. Increased red colour and higher anthocyanin content resulted from sprinkler irrigation, especially when applied at sunset. At harvest, anthocyanin content was correlated with a^*/b^* and hue angle, suggesting that the colorimeter measurements could provide a nondestructive estimate of anthocyanin content.