

PREDICTION MODELS FOR THE IRREVERSIBLE COMMITMENT TO FLOWERING OF 'CHOQUETTE' AND 'BOOTH-8' AVOCADOS*

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The research was undertaken during 2004-2006 to get fundamental information on avocado reproductive development to improve available orchard management practices to increase the productivity of 'Choquette' and 'Booth-8' avocados under the subhumid warm climate (annual avg. temp. = 25.2 °C) of Jalcocotán, municipality of San Blas, Nayarit. The objective was to develop prediction models for the time when apical buds of 'Choquette' and 'Booth-8' avocados grown under rainfed conditions (annual rainfall = 1.453 mm) reach the irreversible commitment to flowering (ICF). In 'Choquette' and 'Booth-8' avocados, the ICF was associated to temperatures ≤ 20 °C and could be mathematically modeled. "Chilling" requirement, for apical buds of 'Choquette' and 'Booth-8', from shoot elongation throughout the ICF, was affected by cultivar and shoot type. From zero day, both spring and summer shoots of 'Choquette' required 58 chilling days accumulated (CDA) (year 1) and 63 CDA (year 2), respectively, with temperatures ≤ 20 °C. For summer shoots of 'Booth-8', 73 CDA (year 1) and 80 CDA (year 2), with temperatures ≤ 20 °C were required. An ICF prediction model named Choquette spring_{CDA ≤ 20} ($R^2 = 0.88$) functional for 'Choquette' spring shoots was obtained. For summer shoots, a unique prediction model which included data from Choquette and Booth-8 cultivars was obtained and named Choquette+Booth-8 summer_{CDA ≤ 20} ($R^2 = 0.90$).

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