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IRREVERSIBLE COMMITMENT TO FLOWERING OF THE 'HASS' AVOCADO IN A SUBHUMID WARM CLIMATE

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To successfully increase floral intensity or promote vegetative growth to decrease flowering in avocado, it is essential to know the time of irreversible commitment to flowering to properly time fertilizer or plant growth regulator applications or pruning to the time of transition from vegetative to reproductive growth but prior to commitment to floral development. Furthermore, to prevent an inadvertent increase in vegetative growth at the expense of flowering, treatments that stimulate vegetative growth should not be made during the transition from vegetative to reproductive growth but after irreversible commitment to flowering. A two-year study was conducted in a commercial avocado orchard in the subhumid warm climate of Tepic, Nayarit, Mexico, to determine the date when winter (February) and summer (July) flush shoots of 'Hass' avocado reach irreversible commitment to flowering. Shoots were defoliated and girdled at different stages of bud development from September to January each year. Irrespective of time of treatment or shoot age, irreversible commitment to flowering of apical buds was attained by 15 October in both years. Buds irreversibly committed to flowering were closed and pointed and with partial senescence of bud scales. Anatomically, the buds showed a convex primary axis meristem and four secondary axis inflorescence meristems. Apical buds from winter shoots showed a more advanced development than those from summer shoots; however, the date of anthesis (25 Feb.) was not affected.