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STIGMATIC RECEPTIVITY LIMITS FRUIT SET IN ALMOND UNDER WARM CLIMATES

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The cause for the erratic yields of two almond cultivars has been searched in order to recommend possible solutions. The lack of sufficient bloom overlap between 'Marcona' and 'Fournat de Brézenaud' in many years may be one of the reasons of this erratic behaviour, but not the only one, as the same behaviour may be observed in two simultaneously blooming cultivars, 'Ferragnès' and 'Ferraduel'. The relatively high temperatures observed during the blooming period significantly reduced the stigma receptivity of these cultivars and, as a consequence, their effective pollination period, showing that stigmatic receptivity may be a limiting factor for fruit set in 'Marcona' and 'Ferragnès' and their subsequent yield reduction under warm conditions. Thus, in the present context of global warming, the search for cultivars tolerant to heat stress during flowering will acquire a special interest, as well as the combination of cultivars with the same chilling and heat requirements in order to ensure their simultaneous bloom.