

# Analysis of the effect of heat stress during flowering on the yield of avocado under Mediterranean climatic conditions

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## ABSTRACT

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The effect of heat stress on 20–25 years of commercial avocado yields of the Fuerte, Ettinger, Hass, and Nabel varieties was analysed, using a heat stress model. The negative effect of heat stress was clearly demonstrated on all four varieties and at all the locations. Half of the interannual variance in yield was explained by this model for the Hass variety, and a third of the interannual variance for the Fuerte, Ettinger and Nabel varieties. The scatter of the annual yields, especially at lower Heat Stress Index values, is due to alternation of the fruit trees associated with heavy crops and other non-climatological factors.

The varietal sensitivity to heat stress was determined by the regression slopes indicating the expected yield loss per unit heat stress. Fuerte is the most sensitive variety to heat stress. Among the three less sensitive varieties to heat stress, Ettinger, Hass and Nabel, there is no significant difference in their sensitivity.