

**Title** Resveratrol increases postharvest firmness in cherimoya fruit (*Annona Cherimola* Mill.)

**Author** Aaram A. Morales-Pérez, Omar Franco-Mora, Álvaro Castañeda-Vildózola, Edgar Jesús Morales-Pérez, Aurelio Domínguez- López

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### Abstract

In Mexico, cropping cherimoya need research for increasing fruit shelf time. Previously, it was observed that 1.6 mM resveratrol (RVS), a natural phytoalexin, applied 15 days before harvest (DBH) reduced the postharvest rate of firmness lose in this commodity. Trying to confirm those results, a second year trial was performed applying with a brush 0 or 1.6 mM RVS at 8 or 15 DBH in both, 'Fino de Jete' and 'Bronceada' fruit. With a texturometer, every two days, firmness was determined from harvest day till 15 days after harvest (DAB). At harvest time, 'Fino de Jete' fruit treated 8 DBH presented 523 N of firmness and non differences between 0 and 1.6 mM RVS were found; the fruit of that cultivar treated 15 DBH showed differences in firmness; control fruit firmness was 552 N and 1.6 mM RVS "painted" fruit had 497 N. After 15 days in room temperature storage, 1.6 mM RVS treated fruit, in both dates of application, kept more than 8% of the fruit firmness; 0 mM RVS fruit presented 3.2 and 0.4% of the initial firmness, for 8 and 15 DBH application time, respectively. On the other hand, for all the four treatments, 'Bronceada' fruit firmness was between 535 and 552 N; moreover 'Bronceada' lost lower percentage of firmness than 'Fino de Jete' fruit. For both dates of RVS application, control fruit of 'Bronceada' kept between 8 and 10% of the initial firmness; applying 1.6 mM RVS at 8 and 15 DBH it was possible to conserve 16 and 12% of the initial value of firmness, respectively. Present result agreed the idea that RVS might be a real alternative to help cherimoya producers to gain time for transporting and marketing their commodity.