

## AIR-COOLED STORAGE CHARACTERIZATION AND EVALUATION OF THE NEW AVOCADO CULTIVAR "ISABEL" (*PERSEA AMERICANA* MILL.)

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J. A. Olaeta<sup>1</sup>, P. Undurraga<sup>1</sup>, Susana Guajardo<sup>1</sup>.

<sup>1</sup> Facultad de Agronomía Pontificia Universidad Católica de Valparaíso-Chile, Av. Brasil 2950 Valparaíso - Chile Correo electrónico: [jolaeta@ucv.cl](mailto:jolaeta@ucv.cl)

The "Isabel" avocado is a cultivar developed and patented by the Agronomy Faculty of the Pontificia Universidad Católica de Valparaíso- Chile. Its origin seems to be hybridization between Hass and Bacon, that transferred to the cultivar a good resistance to low temperatures, near to 1°C.

Fruit shape ranges from ovoid to pear-like. The skin surface is rough and acquires a black-purple color at maturity. It has a relatively large seed and a soft, creamy, slightly sweet pulp, with agreeable flavor characteristics similar to cv. Hass. The following experiment was design to know the optimum postharvest conservation conditions for this new cultivar.

Fruits from cv. Isabel, harvested from the stock plant, with three oil levels (12, 15 and 19 %) were stored at 6 and 8°C. Four different experiments, corresponding to 10, 20, 30 and 40 storage days, were performed. In each experiment, at the end of the storage period, the following parameters were evaluated after simulating a commercialization period: weight loss (%), pulp resistance to pressure (k), external and internal color (L,a,b), respiratory rate (mg, CO<sub>2</sub>/k/hour) and presence of physiological and pathological damages.

Weight loss increased considerably as oil levels increased, indicating that harvesting with 19% oil and storage for 20 days exceeds the maximum acceptable levels of weight loss, affecting appearance. Regarding skin color, the change is produced after 30 days of storage (third experiment). No physiological alterations were detected on fruits harvested with 15% of oil, regardless of temperature, up to 30 days of storage.

Organoleptic characterization indicates that the fruits with best acceptance were those harvested with 15% of oil and stored at 6°C.

After analyzing all these parameters in fruits at different maturity levels and stored at different conditions, we can conclude the best conditions to ensure conservation and quality of the fruits of cv. Isabel in storage conditions include the harvesting with oil levels of 15%, stored at 6°C, with a 70-90% relative humidity and for no longer than 30 days.