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► **To cite this version:**

Barbara Gouble, Patrice Reling, Jean Marc Audergon, Catherine Renard. Temperature effect on respiration and ethylene production of two apricot varieties. 15. International Symposium, Jun 2011, Yerevan, Armenia. hal-02745887

HAL Id: hal-02745887

<https://hal.inrae.fr/hal-02745887>

Submitted on 3 Jun 2020

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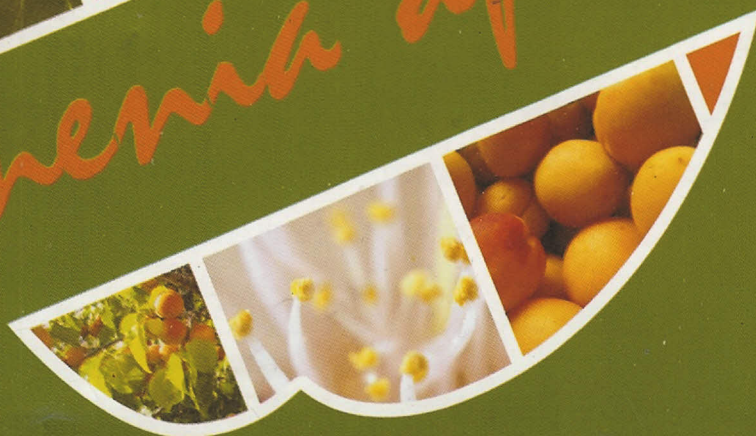
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**JUNE
20-24**

**XV International
Symposium
on Apricot Breeding
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TEMPERATURE EFFECT ON RESPIRATION AND ETHYLENE PRODUCTION OF TWO APRICOT VARIETIES

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Under the frame of Alimentation and Nutrition French and European Programs, an attention has been paid onto fruit and vegetable consumption with a five-a-day objective. In order to reach the objective and to preserve fruit quality characteristics, attention has to be paid to post-harvest conditions. The present study belonged to a national research program untitled 'Tailorpack project'. Its objective was to design a new packaging material (associating gluten and paper) physiologically and environmentally adapted for preserving fruit and vegetable. The physiological parameters such as respiratory parameters, ethylene production, organoleptic criteria and microbiologic growth were studied on three model plants: mushroom, apricot and strawberry.

We present here results obtained on two contrasted apricot varieties. A3844 is a red apricot with a high ethylene production and a very rapid maturation. Bergeron is the major french variety, with a low ethylene production and adapted to long term storage. Effects of temperature on respiration and ethylene production have been monitored during postharvest storage. The Q10, corresponding to the multiplied coefficient for a 10°C increasing temperature, were estimated at picking time and during storage. Results obtained on respiration and ethylene production are discussed. A3844 presents higher respiration and ethylene rates, at each analysed temperature, compared to Bergeron, while Q10 values are more or less similar. For both varieties, Q10 increase with storage time. These results will be of great importance to defined optimal permeability for the futur packaging biofilm.

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