

**Title** The effect of irrigation level and pre-harvest treatments with calcium oxide on storage ability of fig fruits (*Ficus carica* 'Lampa Preta' and 'Bêbera Branca')

**Authors** M.D.C. Antunes, V. Mendonça, M.G. Miguel, M.A. Neves, M.A. Martins, C. Gomes, M.F. Candeias, M.C. Pica

**Citation** ISHS Acta Horticulturae 798:335-339. 2008.

**Keywords** figs; calcium; 'Bêbera Branca'; 'Lampa Preta'; postharvest; quality

### Abstract

Figs are highly perishable. Pre- and postharvest applications of calcium have proven to reduce loss of firmness and slow down the ripening process of fresh fruits. The objective of this work was to study the effect of trees irrigation level and pre-harvest treatments with calcium oxide on the preservation of fig fruits (*Ficus carica* L. 'Lampa Preta' and 'Bêbera Branca') during storage. Fig trees were subjected to two irrigation levels and calcium spraying. It was applied CaO in a concentration of 0.04% on 29th April and 26th May. The quantities of water for irrigation were calculated according to the evapotranspiration and a Kc adapted to the crop. Treatments consisted of applying the calculated irrigation water to the trees with and without pre-harvest CaO spraying and half of the calculated irrigation water with and without pre-harvest CaO spraying. Fruits of 'Lampa Preta' were harvested on 11th July and 'Bêbera Branca' on 30th August. After that, fruits were selected and stored at 2-5°C in single layer alveolar boxes. Fruits were analysed at harvest and through storage for 'Lampa Preta' and 'Bêbera Branca'. Measurements of weight loss, soluble solids content (SSC) and firmness were performed, as well as a taste panel. There were no differences between treatments in weight loss for 'Lampa Preta', but it was higher in half irrigation for 'Bêbera Branca' figs. In fruits of 'Lampa Preta' the treatment normal irrigation without CaO gave the lowest values of firmness at harvest, while 'Bêbera Branca' did not show differences between treatments. 'Bêbera Branca' figs had higher °Brix than 'Lampa Preta' ones. In this experiment, fruits of 'Lampa Preta' had a postharvest life of 7 days, while the ones of 'Bêbera Branca' had duration of more than 10 days.