

Comparison among hybrids and pre-selected cultivars for resistance to ethylene in ornamental peppers

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Acta Horticulturae 1060: 327-331. 2105.

Abstract

There are many factors affecting the post-production phase that determine the quality and extend the shelf life in ornamental plants and flowers. In general, ethylene present during shipping and marketing is one of the most important factors affecting quality of many potted plants. The aim of this work was to compare two hybrids with two cultivars one resistant and another susceptible to ethylene. The plants of four genotypes were grown in greenhouse until 30% of the fruits were ripe. Then the vases were transferred to a room at 25°C with 8-10 $\mu\text{mol s}^{-1} \text{m}^{-2}$ with white fluorescent light. Afterwards, the vases were transferred to a 60-L container and treated with 10 $\mu\text{l L}^{-1}$ ethylene for 48 h. Afterwards, the plants were analyzed for number of leaves and fruits abscised at 0 and 144 h after ethylene treatment. The hybrid 76xBP showed the lowest leaf abscission compared to the resistant cultivar. The hybrid DRxBP showed no difference and was similar to the resistant cultivar. For the fruit abscission, there was no significant difference among the hybrids and cultivars. These hybrids will be used in the ornamental breeding program of *Capsicum* at the Federal University of Paraíba and Federal University of Viçosa.