

Title Relative Humidity Effects on Shelf Life of Chili Fruit of Different Cultivars and Harvest Maturities

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Abstract

Fruit of three chili cultivars (CCA321 and 9955-15 from AVRDC and Oxhorn, a local cultivar) grown under Vietnam conditions and harvested at mature green, turning and red stage were stored at 25°C with three relative humidity (RH) regimes, 80-85%, 90-95% and ambient RH. Weight loss comparably decreased at 80-85% and 90-95% RH compared to that at ambient RH. It did not significantly differ with cultivar and harvest maturity. Fruit decay was generally higher in 9955-15 than the other two cultivars and in more ripe fruit than green fruit. RH effects depended on harvest maturity and cultivar. In mature green fruit, the two high RH regimes (80-85% and 90-95% RH) comparably increased decay and the number of decayed fruit was least in Ox horn and highest in 9955-15. In turning fruit, only 90-95% RH promoted decay while 80-85% RH had comparable effect as ambient RH. In red fruit, the trend was similar to that of mature green fruit except in Ox horn in which decay sharply increased at 80-85% RH at the end of storage. Mature green fruit of the three cultivars mostly failed to turn full red with storage regardless of RH. In contrast, turning fruit mostly turned full red, with 80-85% RH promoting reddening in CCA321 and 9955-15 but not in Ox horn fruit.