

**Title** Tomato cultivar differences in fruit quality and shelf life at ambient and low temperature  
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#### **Abstract**

Four tomato cultivars (CLN2123A and CLN2498E from AVRDC, 'Perfect 89' from Syngenta and FM1080 from RIFAV) grown under Vietnam conditions were evaluated for fruit quality and shelf life attributes at ambient (16.5-25.5°C, 81.5-91.5% RH) and at 10°C (75-100% RH). Two harvest maturities were used, mature green and breaker stage. CLN2498E had the highest firmness at mature green stage which decreased by about half at breaker stage comparable to that of 'Perfect 89'. CLN2123A and FM1080 had the lowest firmness at both harvest maturities. During storage, firmness decreased due to ripening-associated softening. Softening was slowed at 10°C and cultivar differences were maintained. At ambient, softening was so rapid that at the end of storage, all cultivars regardless of harvest maturity had comparable firmness. SSC increased with storage at 10°C particularly in fruit harvested breaker regardless of cultivar. Acid content did not change much with storage, except in FM1080 in which it decreased at ambient but increased at 10°C. Decay of fruit harvested breaker had no marked cultivar differences. For fruit harvested mature green and stored at ambient, high-firmness cultivars (CLN2498E and Perfect 89) had significantly more decay than the other two cultivars while at 10°C, CLN2498E had also the highest decay, suggesting that high fruit firmness, a desirable trait for increased resistance to handling damage, is not correlated with long shelf life.