Changes in fruit firmness, quality traits and cell wall constituents of two highbush blueberries (*Vaccinium corymbosum* L.) during postharvest cold storage

Binghua Liu, Kaifang Wang, Xiuge Shu, Jing Liang, Xiaoli Fan and Lei Sun

Scientia Horticulturae 246: 557-562. (2019)

Abstract

Blueberries are now the second most economically important soft fruit. However, they are highly perishable and susceptible to rapid spoilage. Softening is one of the main reasons for short postharvest life of blueberries. The changes of fruit firmness, weight loss, flavor quality and cell wall composition of *Vaccinium corymbosum* cv. Bluecrop and *Vaccinium corymbosum* cv. Sierra were investigated in this study. The results showed that fruit firmness declined concomitantly with the increase of fruit weight loss and water soluble pectin (WSP) content paralleled by a decrease in the content of cellulose (CEL) and hemicellulose (HCEL) during postharvest cold storage at 0 °C and 90% relative humidity. Compared with Sierra blueberries, Bluecrop blueberries were much more resistant to postharvest cold storage as manifested by the higher values in fruit flavor quality and firmness which were associated with less weight loss, lower WSP content and higher amount of CEL and HCEL.