**Title** Controlled-atmosphere storage of highbush blueberries (*Vaccinium corymbosum*) and rabbiteye blueberries (*V. Ashei*)

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**Abstract**

Blueberry fruit can be easily stored at low temperature and high R.H., for nearly one month, without significant loss of quality. There are differences in storability between cultivars. A screening research was carried out in 2004 to evaluate the storability of 10 different cultivars, some of them produced in different localities, in the plains or on hills. Some cultivars ('Berkeley', 'Brigitta', 'Elizabeth', 'Elliott', 'Lateblue' and 'Ozarkblue') were highbush (*V. corymbosum*) and some ('Briteblue', 'Centurion', 'Powderblue' and 'Tifblue') were rabbiteye (*V. ashei*). Twenty boxes of each cultivar were harvested and immediately cooled at 0°C. Within 12 hours the boxes were divided into five groups and stored in five different atmospheres: 2% $O_2$ and 10% $CO_2$; 4% $O_2$ and 10% $CO_2$; 2% $O_2$ and 14% $CO_2$; 4% $O_2$ and 14% $CO_2$; control, 21% $O_2$ and 0% $CO_2$. Control boxes were checked monthly for decay, withering and general appearance of fruit; the boxes in the different atmospheres were checked after 2, 3, 4 or 5 months' storage. Weight loss, color, firmness, number of decayed fruit, soluble solids, pH and acidity of juice of fruit were measured and general appearance and commercial quality were evaluated. All controlled atmospheres tested extended storability of fruits of all cultivars as compared to control. High differences of storability were found between cultivars: generally rabbiteye cultivars gave better results than highbush ones. High $CO_2$ significantly reduced decay. The responses of different cultivars to CA composition are discussed.