

**Title** Evaluating berry firmness and total soluble solids of newly released highbush blueberry cultivars

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### **Abstract**

Berry firmness and total soluble solids (TSS) of three newly released highbush blueberry cultivars ('Draper', 'Liberty', and 'Aurora') were evaluated in the 2005 growing season against three popular commercial highbush cultivars ('Duke', 'Bluecrop', and 'Elliott') grown in the Northwest during and after cold storage at temperatures between 1 to 4°C. These experiments were conducted using berries from the first pick in a variety evaluation plot at the North Willamette Research and Extension Center. Berry firmness was determined with a FirmTech II firmness tester. After cold storage durations of 1, 2, and 3 weeks, berries were taken out and acclimated at room temperature. Berry firmness and TSS then were determined every three days until berries were considered unmarketable. At week 1, 'Draper' and 'Duke' had the highest firmness in the first three days, and 'Elliott' and 'Liberty' had the lowest firmness during the 12 days sitting at room temperature. 'Liberty' had the highest TSS among all cultivars. At week 2, 'Duke' had the highest firmness while 'Elliott' had the lowest firmness during the 12-day period. For TSS level, 'Bluecrop' was the lowest and 'Elliott' and 'Liberty' were the highest. At week 3 during the 12-day test period, the cultivars with the highest and lowest firmness were 'Duke' and 'Elliott' respectively. TSS in 'Liberty' was still among the highest, and 'Bluecrop' and 'Liberty' had the lowest TSS level among all cultivars. If shelf-life is measured by berry firmness at room temperature, the shelf-life of 'Duke' and 'Draper' were very similar. 'Aurora' had a shelf-life better than 'Elliott'; however 'Liberty' had a shelf-life no better than 'Bluecrop'.