Abstract:

Fruit of 15 selections and cultivars were harvested when judged to be commercially ripe. Fruit were held at 4°C for 4 h and then injured by dropping a 10 g weight, with a 2.43 mm diameter head, 6 cm onto individual fruit. The injured fruit were stored in polystyrene clamshell containers at 1°C for 14 days. Fruit samples were weighed at harvest and after storage to determine weight loss. Fruit were then rated visually for severity of pitting using the following scale: 4=none; 3=slight; 2=moderate; and 1=severe. Impressions of the pits were made and stored in glass vials that were flushed with N2 before sealing and storage at room temperature. The diameter, depth, and area of the pit were measured from the impressions using an image analysis system that consisted of a dissecting microscope with a video camera.

'Symphony' was the most resistant cultivar to pitting, based on visual evaluations, depth of pit, pit diameter, and area of pit. The selection 13N-06-49 was the least resistant, with the poorest visual rating and largest pits. 'Lapins', 'Skeena', 'Sweetheart', and 'Symphony' were more resistant than 'Bing' to the pitting injury. The visual rating of 'Staccato' was better than that of 'Bing' and it had a smaller pit diameter than 'Bing', but other measurements were similar to 'Bing'. There also were significant correlations among the various parameters measured. Visual rating was correlated significantly to the pit size measurements. Also, size of pit was correlated to weight loss and date of harvest.