

Abstract:

Experiments were conducted during 1999 and 2000 with the rabbiteye blueberry (*Vaccinium ashei* Reade) cultivar Brightwell to determine how various harvesting and handling tactics influenced firmness losses. Firmness was determined with a FirmTech II firmness tester on fruit samples before and after cold storage. Fruit harvesting methods included machine harvesting in bulk, hand harvesting in bulk, and hand harvesting directly into clam shell containers. Assessment of pre-cooling effects were made by comparing firmness of fruit that were placed immediately over ice after harvest to fruit that remained at ambient temperatures for 24 h after harvest. Additional measurements were made to discern the effects of grading and sorting on fruit firmness. The data overall indicated that fruit firmness varied considerably depending on the harvesting and handling methods experienced. The greatest loss in fruit firmness (20-30%) was caused by machine harvesting. This was followed by a 10-15% loss of firmness due to grading and sorting. Keeping fruit at ambient temperature for 24 h after harvest resulted in only a 3-8% loss in firmness as compared to cooling fruit immediately. Removal of harvester padding resulted in a 4-8% loss of fruit firmness. These findings should be useful to growers and packers in targeting segments of their operations that can be manipulated to improve berry firmness and quality for fresh market sales of rabbiteye blueberries.