

Title Maintaining quality of mild onions during export
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Abstract

Onions of var. J514 were hand harvested from site 1 and field cured for 0, 1, 3 or 5 weeks. At site 2, onions of var. 890 were machine harvested and forced air cured for 0, 1, 2 or 3 days. Predator onions at site 2 were harvested by either hand or machine, then forced air cured for 0, 1, 4 and 18 days. Hand harvested onions were not injured by the harvest process. Mechanical harvesting damaged approx equal to 10% of var. 890 bulbs and approx equal to 22% of Predator bulbs. Mechanically harvested bins contained high amounts of foreign materials and green leaves. Firmness, weight loss and disease development during storage were not affected by harvest method. During field curing, the onions softened, soluble solids increased, and disease developed. Disease developed in stored bulbs as field curing time increased. Longer curing times increased both disease severity and total number of bulbs affected after storage. Forced air curing proved beneficial for both onion varieties from site 2. Onion quality was better maintained at 5 deg C than at ambient temperature. Refrigerated storage did not affect firmness, but weight loss and disease were reduced, as in the case of cured varieties J514 and 890. However, refrigeration did not benefit cured Predator onions. Initially, onions from site 1 appeared to have the best quality, being larger and firmer than the other varieties, although with lower TSS. These differences persisted in storage. Dry matter did not vary among the varieties used. Disease development was significantly greater in var. J514 bulbs at ambient temperatures compared to var. 890 and Predator.