

Title Physiological storage decay in apples cv. Aroma at low temperature and low O₂

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Abstract

The major part of Norwegian apples is marketed within two months after harvest, but because of increasing interest in freshly made juice and supply of locally produced food, storing of apples for a longer time is of increasing interest.

The main late ripening apple cultivar grown in Norway, Aroma, is susceptible to storage decay, especially fungal decay. Low temperature and low O₂ is known to decrease fungal decay. Cv. Aroma were stored at 1 or 2% O₂ or normal atmosphere and at 1 or 3°C for 3.5 or 5.5 months.

The apples were assessed for quality parameters and amount of storage decay (both physiological and fungal decay) at the end of cold storage on February 1 or April 1 and after two weeks at room temperature (20°C) for two years. Physiological decay was significantly decreased by low oxygen, but only at the lowest storage temperature. No differences between storage temperature was found for either of the oxygen contents in the storage atmosphere. The amount of physiological storage decay was higher in the first year of experiment. The predominantly physiological decay was soft scald and internal breakdown.