

Title Location and temperature effects on soft scald in 'Honeycrisp' apples.
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Abstract

The effects of growing and storage locations and storage temperature on soft scald incidence of 'Honeycrisp' apples were studied. In 1999 and 2000, fruits were produced at five different locations (Massachusetts, Michigan, Minnesota, New York and Washington), harvested at two different times (with the first harvest occurring at the commercially 'acceptable' time for each region and the second, 2 weeks after the first harvest), and stored at two or five different storage locations (Massachusetts, Michigan, Minnesota, New York and Washington) in USA. In 1999, fruits were stored at 0 or 2 deg C. Soft scald was only observed in fruits from one growing location and primarily at 0 deg C. More soft scald was observed from the second harvest than from the first. Scalded fruits were preclimacteric as determined by ethylene production rate, whereas fruits from the other locations were postclimacteric. In 2000, fruits from four of the growing locations developed soft scald, and soft scald incidence was not related to ethylene production rate. Scalded fruits had higher concentrations of phosphorus, boron, and magnesium, and lower concentrations of manganese than unaffected fruit. Development of soft scald was not related to fruit ethylene production rates, was dependent on growing location, increased with later harvest, and may be related to fruit elemental content.