

**Title** Low-temperature induction of ripening capacity in ‘Comice’ and ‘Bosc’ pears as influenced by fruit maturity

**Author** David Sugar and Sally R. Basile

**Citation** Postharvest Biology and Technology, Volume 51, Issue 2, February 2009, Pages 278-280

**Keywords** Low-temperature conditioning; Pear ripening; Winter pears; *Pyrus communis*

### **Abstract**

The relationship between fruit maturity at harvest and the duration of postharvest exposure to  $-1\text{ }^{\circ}\text{C}$  required to induce ripening capacity was studied in ‘Comice’ and ‘Bosc’ pears. As fruit of both cultivars were harvested progressively later, shorter durations of exposure to  $-1\text{ }^{\circ}\text{C}$  were required to induce ripening capacity. The relationship between the duration of conditioning at  $-1\text{ }^{\circ}\text{C}$  and the fruit flesh firmness after 7 d at  $20\text{ }^{\circ}\text{C}$  was well-described by second-order polynomial equations. These equations were used to determine the number of days at  $-1\text{ }^{\circ}\text{C}$  required to induce ripening capacity for each harvest date. A linear relationship was observed between the number of days after fruit in the orchard reached maturity that fruit were harvested and the number of days of low-temperature conditioning needed to induce ripening capacity. This relationship may be used to predictively estimate the duration of low-temperature conditioning required to induce ripening based on harvest date.