

**Title** Kinetic modelling for optimal packaging and storage of sweet cherries  
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### **Abstract**

This paper discusses the relationships between storage environments, respiration rate and storage life using sweet cherries as a case study. Cherries are a highly perishable crop and good temperature control is vital to maximise retention of quality and ensure adequate storage life. Slow or delayed cooling and temperature abuse during transport or marketing will all accelerate deterioration, increasing the risk of losses through poor product appearance or rots. Using data drawn from the literature and experimental studies of sweet cherry physiology and storage, the dependence of cherry respiration rate on temperature for normal air storage is shown to be adequately described by a generic Arrhenius relationship. The application of the derived models is illustrated through typical supply chain data to highlight the importance of the cold chain in maintaining cherry fruit quality.