

#### Abstract:

Horticultural produce is often stored in vented cardboard packages. Vent design has a significant effect on the conditions the produce experiences. Investigations into the importance of air interchange between package and external air and the effect of vent design were conducted. A novel technique involving monitoring oxygen concentration following nitrogen flushing was employed to measure the interchange of air between the package and environment. Air interchange was found to contribute significantly to heat transfer, and vent size and location found to significantly affect the rate of interchange. The Colebrook-White & Darcy-Weisbach equations were tested and found to accurately predict flow in the channels formed between pallets.