

# Post-harvest Cold Chain R&D

By

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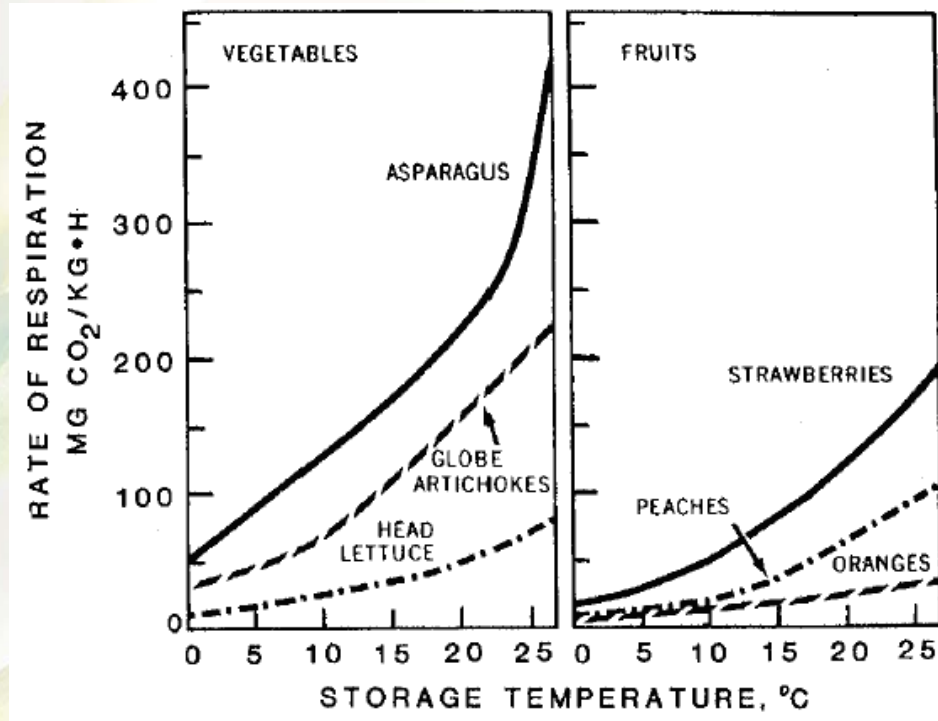
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# Introduction

- Importance of post-harvest cooling for preservation of post-harvest fruit quality



(Hardenburg et al., 1986) 1986



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# Condensation on fruit





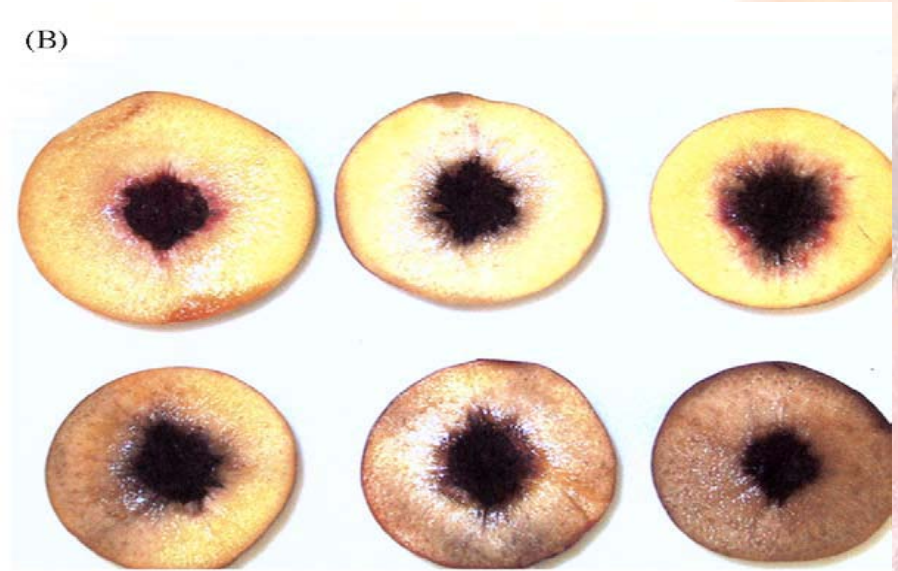
## What could go wrong if gaps are not managed in the Cold Chain?



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# Chilling Injury on PE and NE



Lurie & Crisosto, 2005



# Stem dehydration and browning



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# SO<sub>2</sub> damage/bleaching







ORCHARD



PACKHOUSE



INSPECTION



COLDSTORE



# Supply Chain - PPECB Involvement



TRANSPORTER



INSPECTION



SUPERMARKET



CONSUMER



INSPECTION



DEPOT



LOADING



COLDSTORE



INSPECTION



DISCHARGE



IMPORT PORT

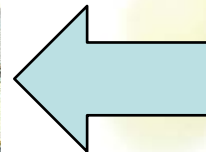
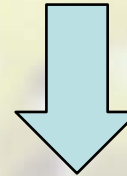
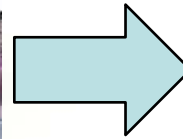


SHIP





## 2...TYPICAL LOGISTICS OPERATION

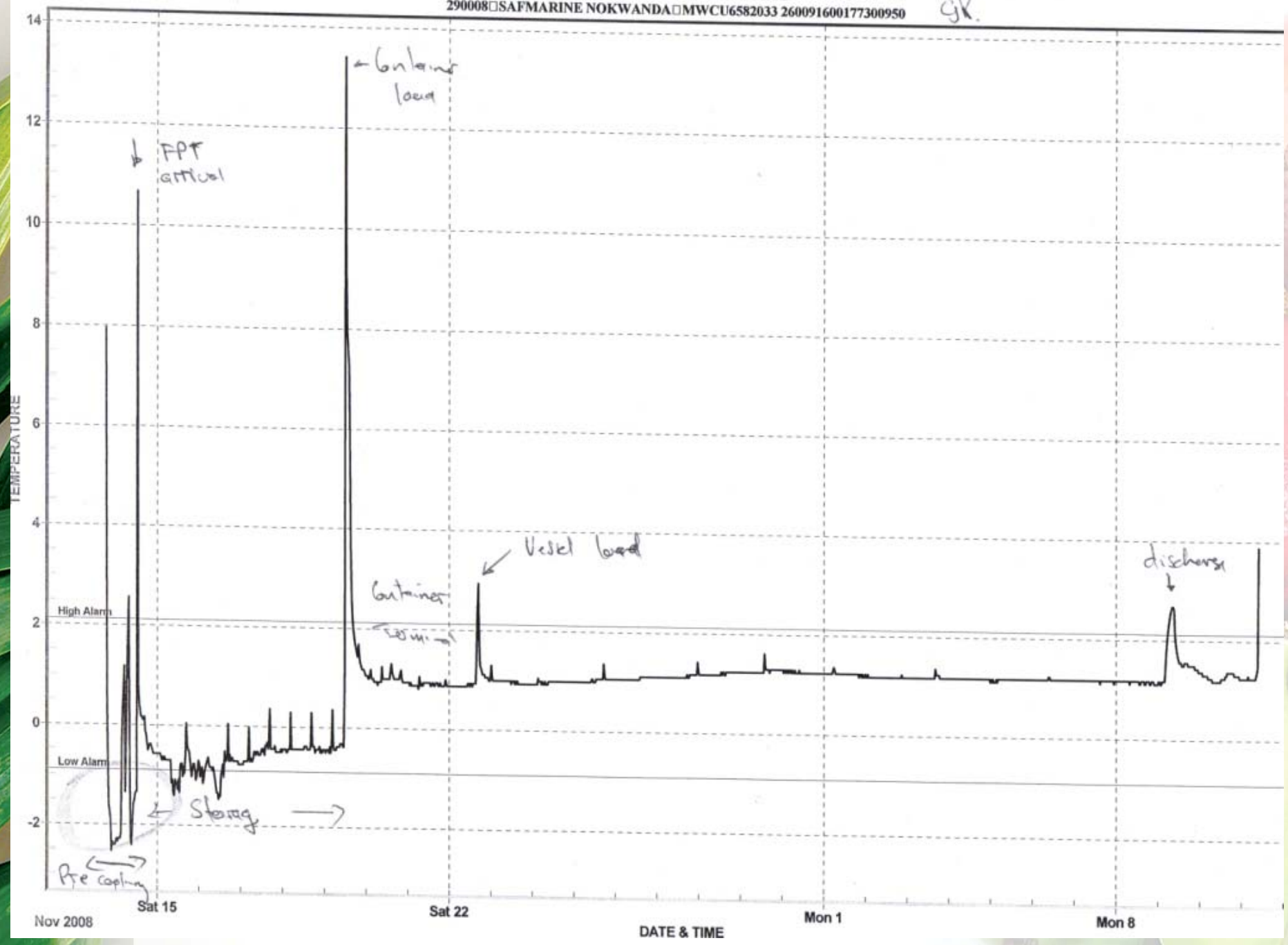


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# TEMPERATURE DATA

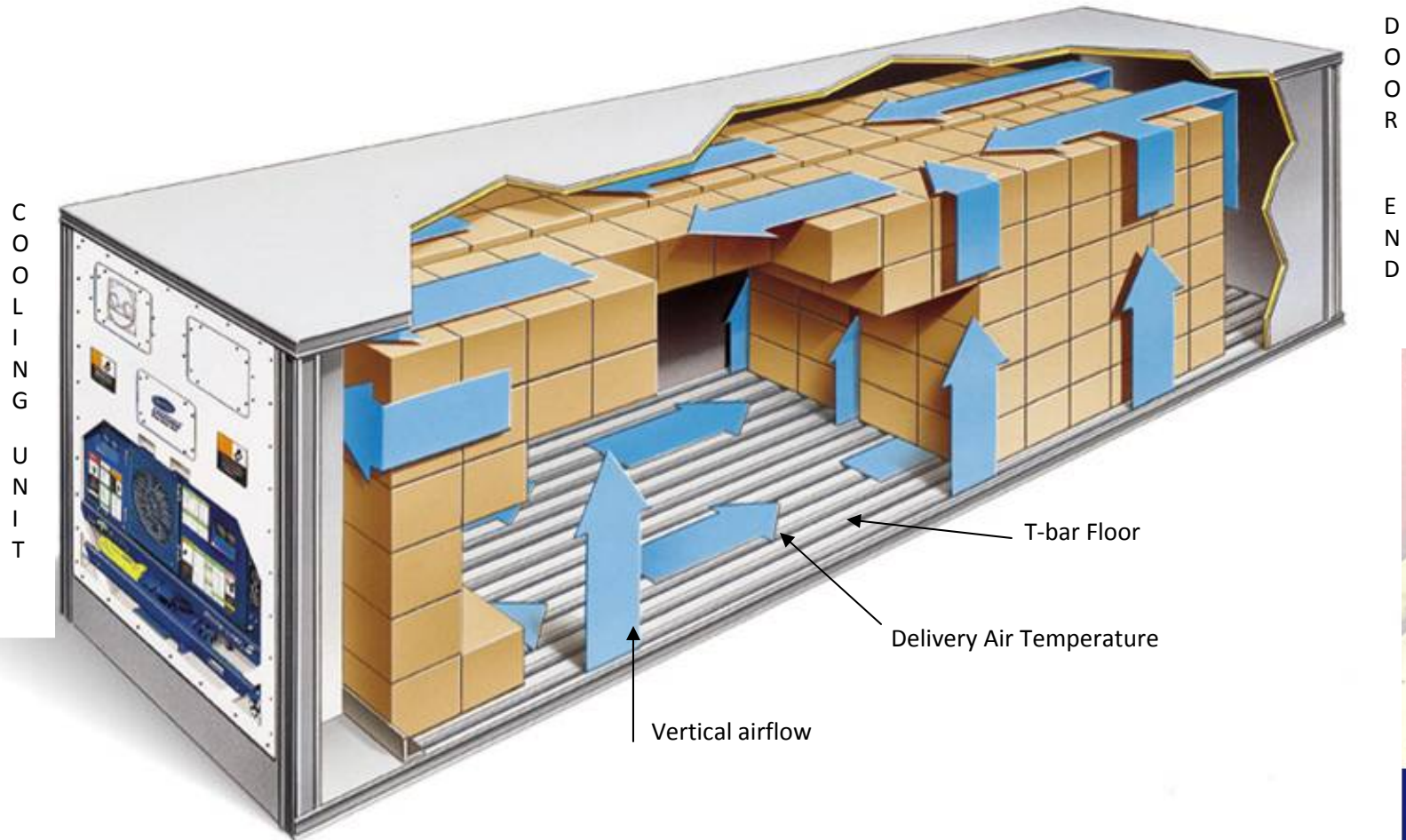
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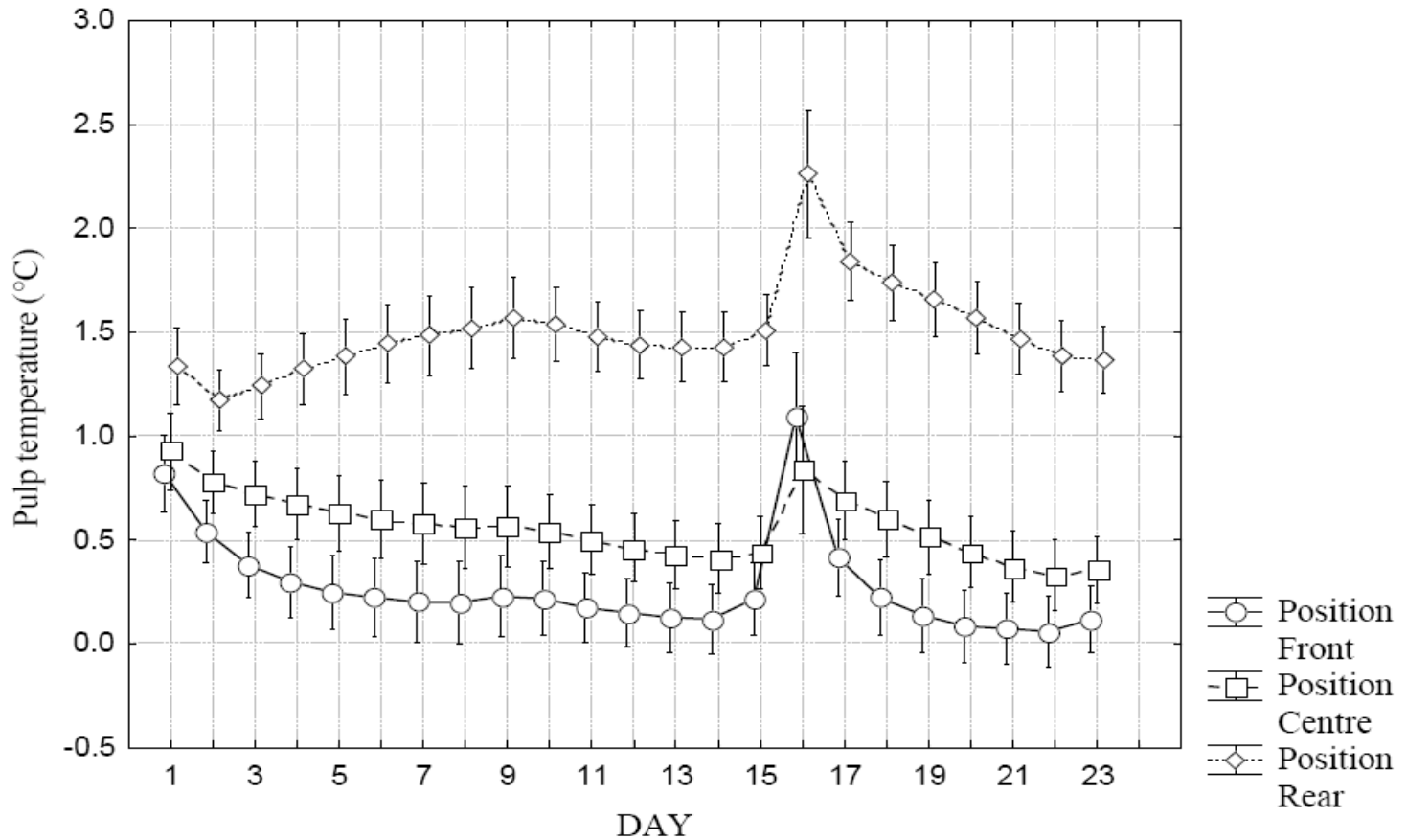




# R&D projects



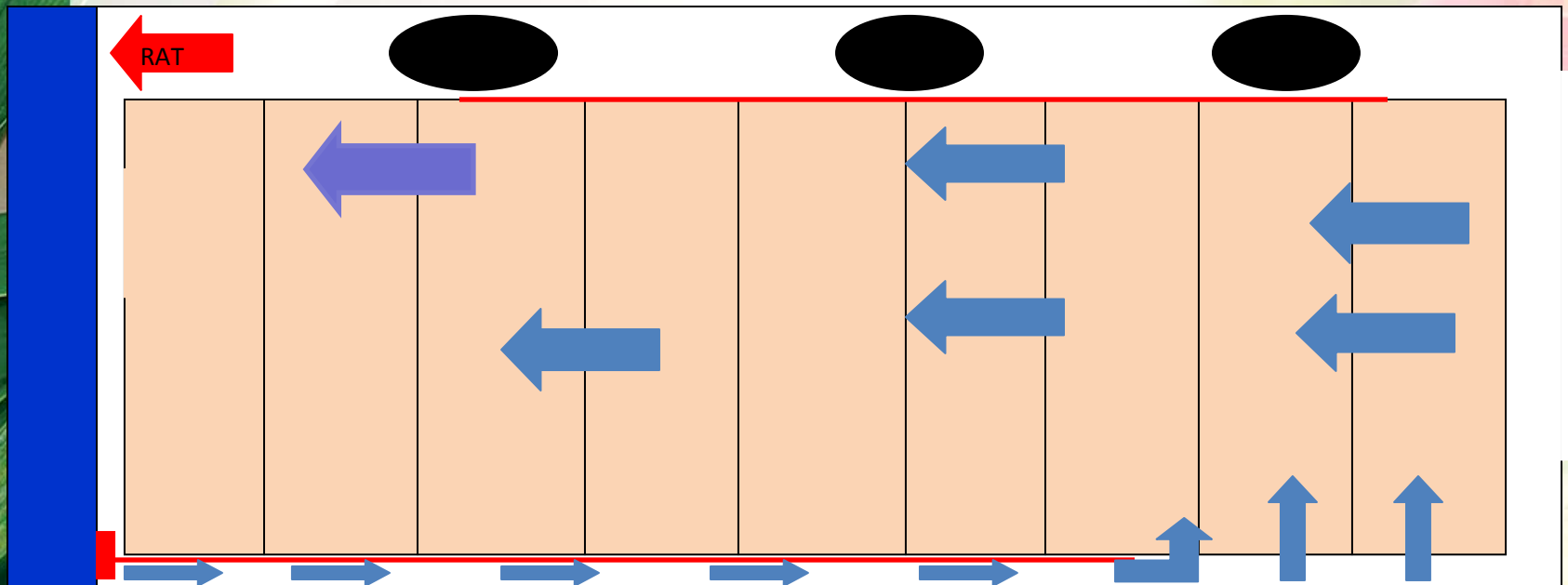
# Pulp temperature distribution in 40' reefer container



(Ngcobo *et al.*, 2007)



# HAF technology



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# Current projects

- Possibility of shipping Fynbos via sea freight
- Development of pomegranate post-harvest handling protocols and shipping recipe's
- Alternative methodology within the cold chain – audit based approach



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# Communication Plan

- Publications in scientific journals
- Publications in fruit journals
- Presentations in national and international symposia
- Presentation in industry workshops
- Participation in TES



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# THANK YOU

