

Avocado Exports

The South African Story



Louis Vorster & Derek Donkin

July 2009



Background

The main cultivars exported from South Africa

- Fuerte
- Pinkerton
- Hass
- Ryan

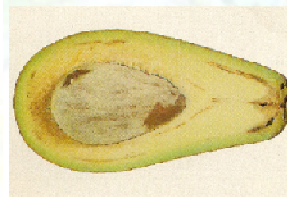




History

Until the late 1980's quality of export fruit was a major challenge

- Cold damage
- Grey pulp
- Pulp spot
- Post harvest decay (Anthracnose/stem end rot)



Fruit sensitivity a function of climatic conditions

- South Africa, Mexico, Australia (Queensland/NSW) and New Zealand similar.



Research & Development

- A number of people contributed to develop a successful and competitive export avocado industry through dedicated research.
- Amongst these were Joe Darvis, Jan Toerien, Stefan Köhne, Blackie Swarts, Jurg Bezuidenhout, Guy Whitney, John Bower, Jonty Cutting, Nigel Wolstenholme, Gawie Eksteen, Bertie Truter, etc.
- Institutions : Westfalia, University of Natal and ARC - ITSC





Orchard practices

- Nitrogen levels
- Calcium translocation
- Potassium / Nitrogen ratio
- Cell wall integrity / browning enzymes
(Polyphenol oxidase)



Disease Control

Pre-harvest

- Copper oxychloride
- Timing of application
- Efficacy of application

Post-harvest

- Prochloraz (Omega / Chronos)
- Westfalia Biocoat[®]





Picking

- Gentle handling of fruit
- Stem end dip (Prochloraz / Westfalia Biocoat®)

Tendency towards smaller trees

Pruning / hedge rows

Objective : Limit lenticel damage /
bruising / stem end rot





Packing

- Quality evaluation at intake (picking injuries and other defects)
- Fruit handling – important principles
 - Intake
 - Roller speed
 - Type of brushes
 - Limit falls and rolling of fruit
 - Measurements – electronic apple (Visier)



Objective : Limit lenticel damage and bruising



Cooling

- Cold room design

Limit moisture loss

$$Q = VI \times Sw \times \Delta T$$

- Carton design

- Ventilation
- Strength





Logistical Efficiency

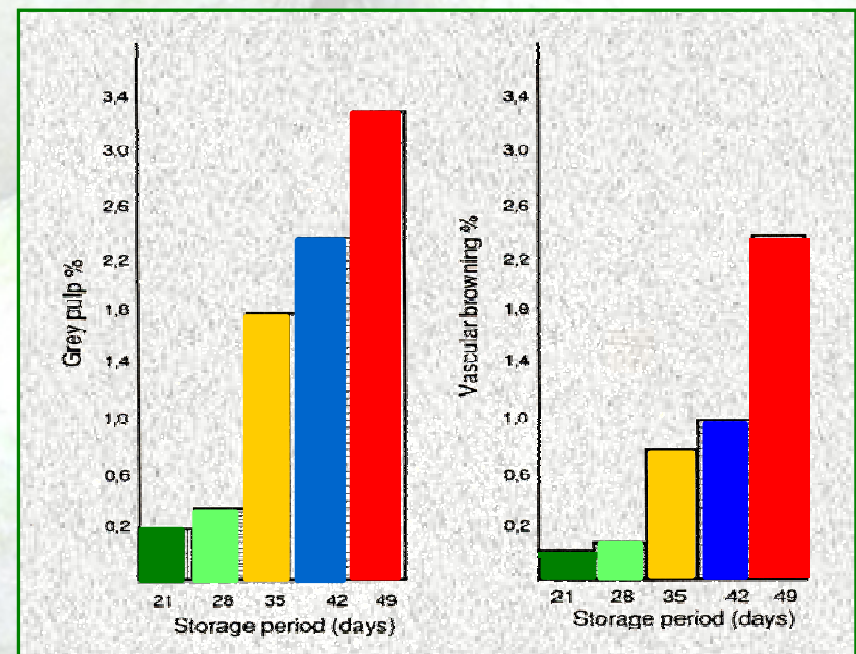
- Controlled atmosphere (CA) - most common post harvest treatment for SA shipments
- 1-MCP (Smartfresh™) technology is starting to play a more important role as an alternative
- Advanced Fresh Air Management (AFAM plus) might also be a consideration for the future.





Temperature management

- Temperature regime
- Fruit maturity / cultivar
- Time / temperature interaction
- Fruit age





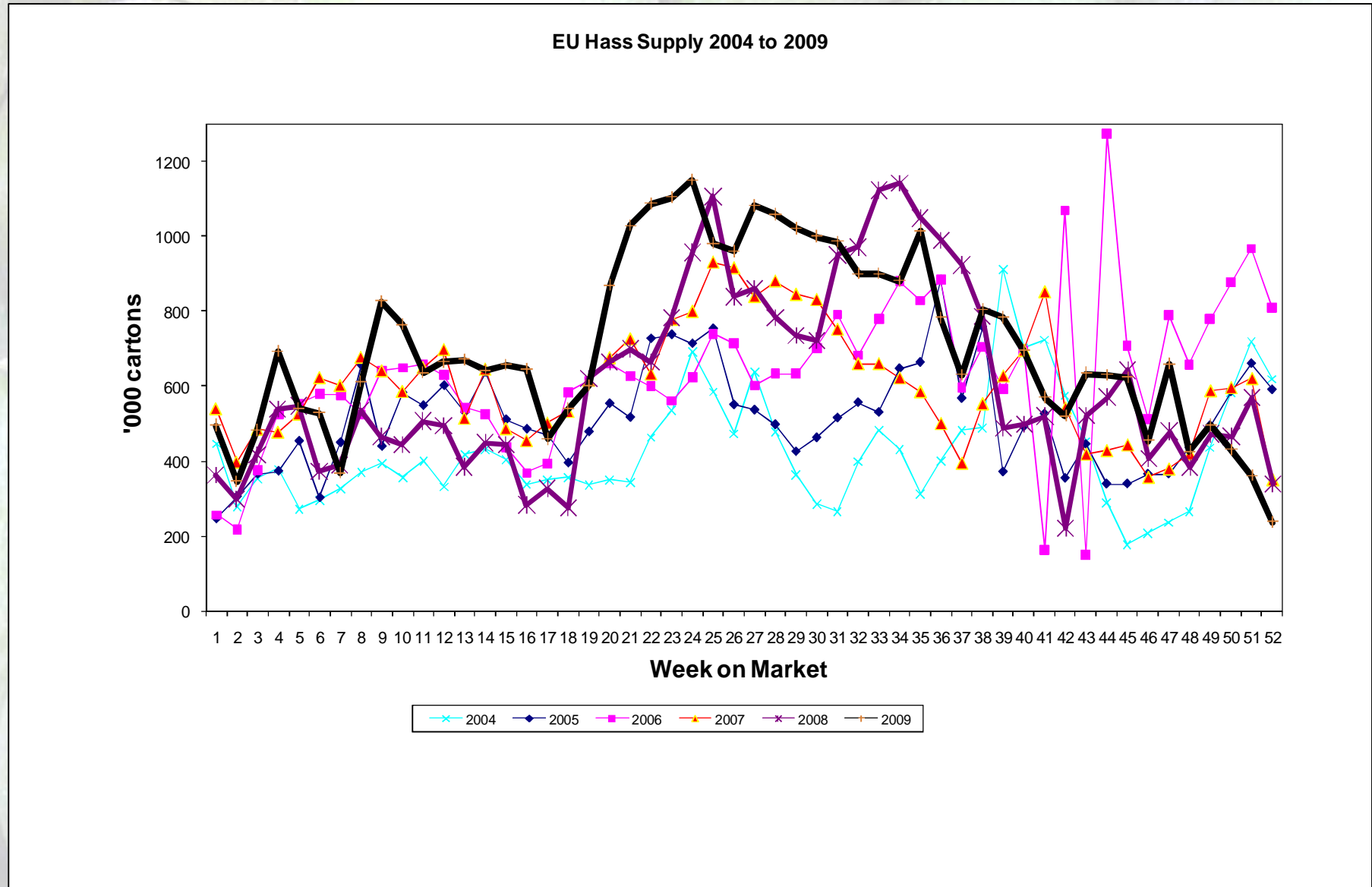
Market dynamics – impact of fruit quality

- Undersupplied market – forgiving
- Oversupplied market – very competitive



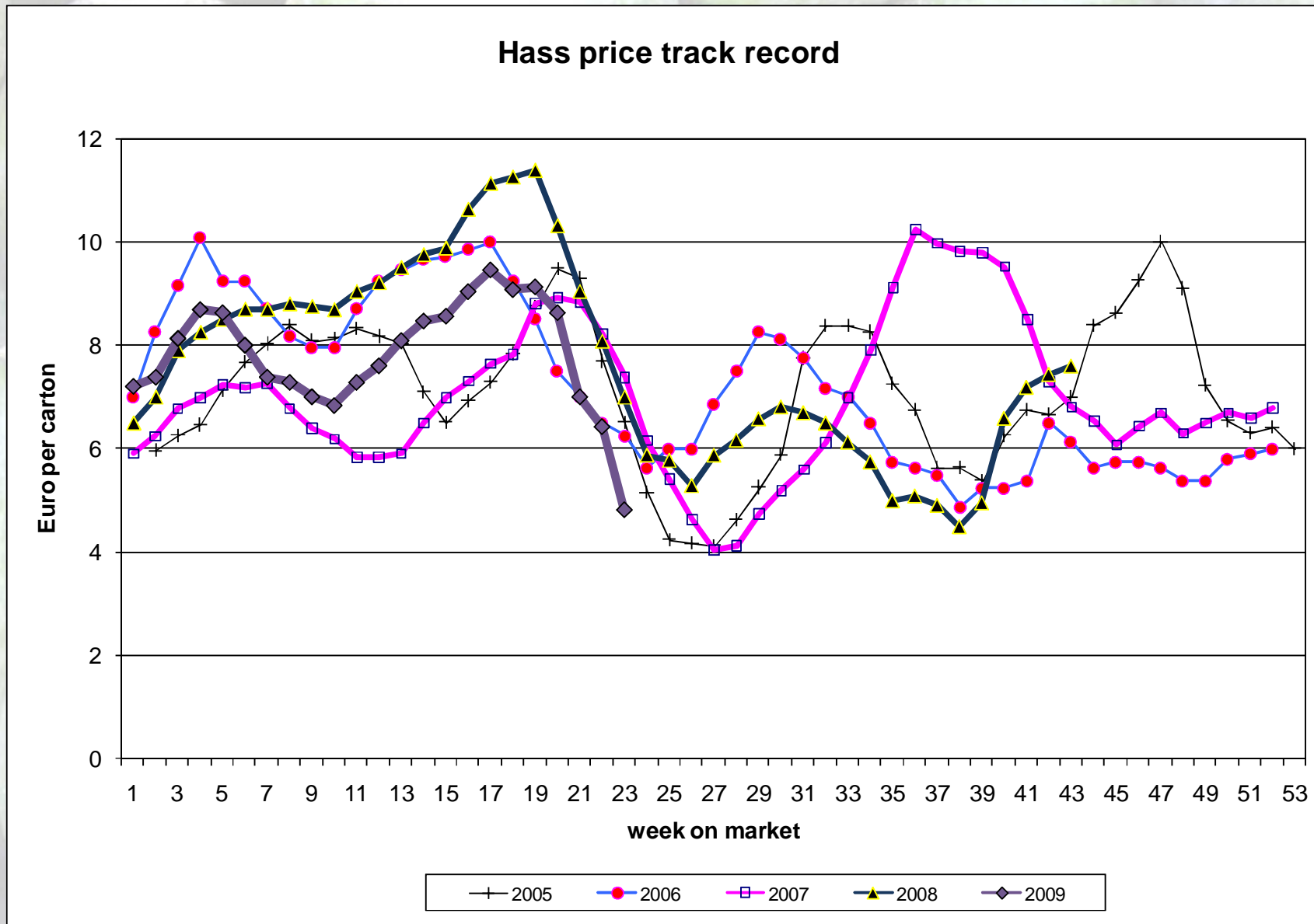


European supply





Price trends in Europe



The Tesco Strategy

Price Virtuous Circle

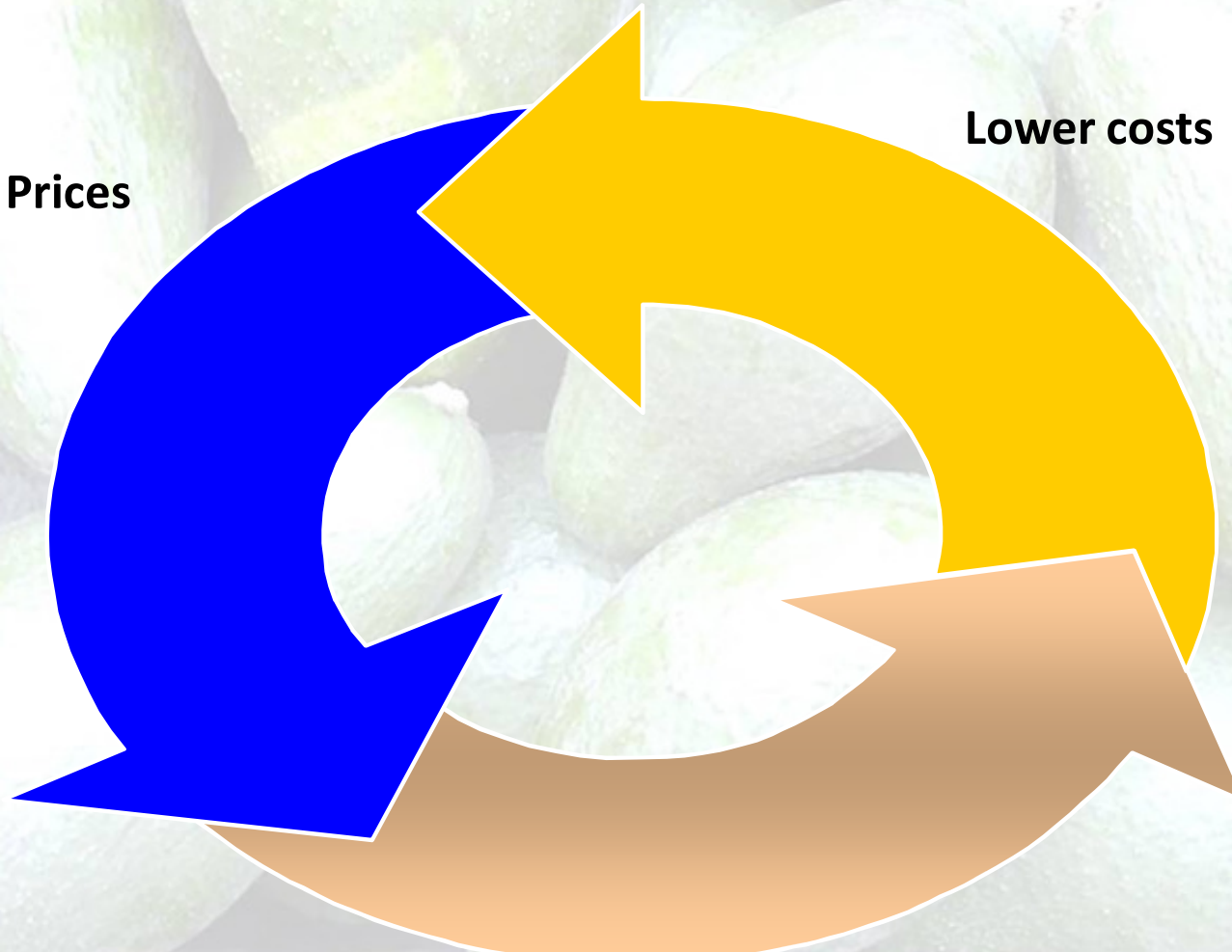
Lower Prices

Lower costs

Internal Efficiency

Higher Volume

Tesco





SA Exports

- Consolidation within the industry
- Grower driven export companies
- Forward integration into markets



Market development

- Selling more in existing markets
 - Create greater awareness for avocados as a health product
 - Availability of Ripe & Ready to eat avocados
- Develop new markets
 - Israel's efforts in former Eastern Block countries





European market growth

('000 tons) (Year = 1 Sep – 31 Aug)



* Projected





Market sophistication - Accreditations



NATURE'S CHOICE

EUREPGAP[®]



Albert Heijn





Conclusion

Through the implementation of sound scientific and commercial principles South Africa has become one of the leading avocado suppliers to the European market.



Thank you

