



Introduction

- Hass popular due to its excellent shelf life and eating quality
- Hass trees tend to produce a large percentage of undersized fruit within a relatively short season (peak picking June and July)
- Niche market for smaller Hass fruit (180-250g)
- Alternate bearing pattern

Aims

- To find a new Hass-like cultivar with consistently higher yield and more favourable fruit size distribution than Hass
- Extend the Hass season

Evaluating cultivars: Long-term project

- | | |
|---------------------------------------|------------|
| ▪ Import of budwood | Year 0 |
| ▪ Quarantine | Year 1 |
| ▪ Propagation (top-working) | Year 2 |
| ▪ First experimental crop | Year 4-5 |
| ▪ Pre-commercial evaluation | Year 8 |
| ▪ Negotiation of commercialisation | Year 10 |
| ▪ Preparation for commercial planting | Year 12-15 |

New Hass-like cultivars

- Harvest and Gem
- Budwood imported from California in 1995
- Top-working started 1996
- Hass as standard



Parameters monitored

- Time of maturity
- Yield
- Fruit size distribution
- Fruit quality
 - picked on several dates from June to October
 - evaluated after simulated shipment (5.5°C, 28 days)
- Taste

Results 2003

<i>Cultivar</i>	<i>Start of picking</i>		<i>End of picking</i>	
	<i>Month</i>	<i>Dry Matter Content (%)</i>	<i>Month</i>	<i>Dry Matter Content (%)</i>
Hass	June	29	Sept	35
Harvest	July	25	August	28
Gem	Sept	30	October	42

Yields 1999 - 2003

<i>Cultivar</i>	<i>Yield (t/ha)¹</i>						<i>Count peak²</i>
	<i>1999</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>Cum.</i>	
Harvest	29	37	52	19	43	180	12-16
Gem	11	28	24	27	23	113	12-14
Hass	3	20	30	35	15	103	16

¹ extrapolated to 200 trees/ha

² based on a 4 kg carton

Fruit quality 2002-2003

- Gem
 - good fruit quality in 2002 and 2003
- Harvest
 - high incidence of vascular browning in 2002
 - good fruit quality in 2003



Conclusions

- Gem, and to some extent Harvest, have potential
- Next step: evaluation in other South African production regions
- Performance on new rootstocks to be evaluated
- Cultivar specific protocol for post-harvest handling to be established

Commercialisation of new cultivars

Lamb Hass

- about 2% of Hass volume
- logistics of exporting small volumes
- ripening / handling



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