

COMMERCIALLY VALUABLE YIELD: A NEW MEASURE OF PRODUCTION

ED Ernst



7de
jaarlikse
Maluma
dag 2017

90
allesbeste
Boerdery. Kweekery. Padstal
90 PASSIEVOLLE JARE

 Maluma
avo



Introduction

$$\text{PROFIT} = \underbrace{(\text{Production} \times \text{Price})}_{\text{Production Value}} - \text{Cost}$$

- So, how can you increase farm profit :
 - Keep input costs in check (R/ha)
 - Maximise total production (ton/ha)
 - Maximise price (R/carton)
- Straight-forward, right?

Introduction

- Unfortunately, not that straight-forward
- All yields are not created equal!
- Need to look at quality also. We all know this very well.
- But, what is fruit quality?
- Fruit quality can be seen as the absence of price discounting factors in terms of some reference price :
 - Internal quality defects
 - Grey pulp, Anthracnose, Internal Cold Damage, etc.
 - External quality defects
 - Black spot, Pepper spot, Mechanical damage, etc.

Fruit Size

- What about fruit size?
- Concept of commercially valuable fruit size discussed in various publications :
 - Kallsen, C.E. (2005) – Topping and manual pruning effects on the production of commercially valuable fruit in a midseason navel orange variety.
 - Chao, Ferguson & Lovatt – 2,4-D increases the yield of commercially valuable large size fruit of clementine mandarin.
 - etc...
- Lovatt & Salazar-Garcia (2000), specifies Commercially Valuable Fruit in avocados to be 213g – 269g (Count 14 – 18).

Why Commercially Valuable Fruit?



7de
jaarlikse
Maluma
dag 2017

90
allesbeste
Boerdery. Kweekery. Padstal
90 PASSIEVOLLE JARE



 Maluma
avo

Why Commercially Valuable Fruit?



7de
jaarlikse
Maluma
dag 2017

90
allesbeste
Boerdery. Kweekery. Padstal
90 PASSIEVOLLE JARE



 Maluma
avo

Why Commercially Valuable Fruit?

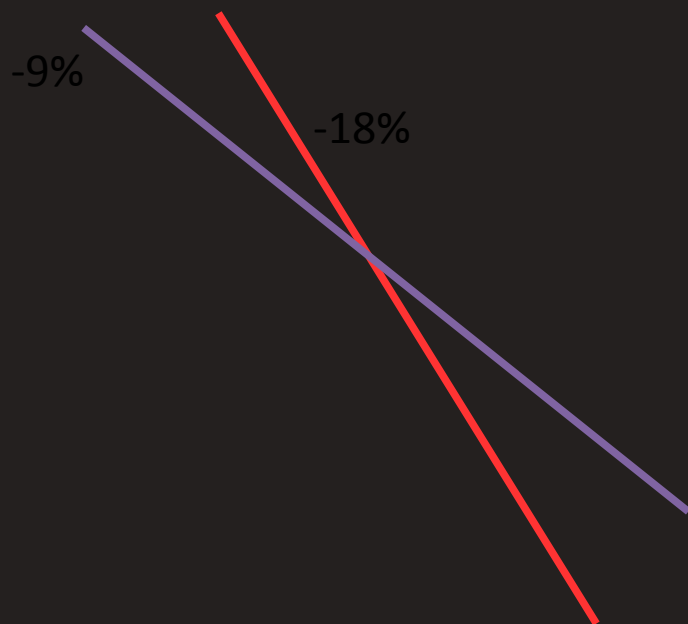


7de
jaarlikse
Maluma
dag 2017

90
allesbeste
Boerdery. Kweekery. Padstal
90 PASSIEVOLLE JARE

 Maluma
avo

Why Commercially Valuable Fruit?



7de
jaarlikse
Maluma
dag 2017

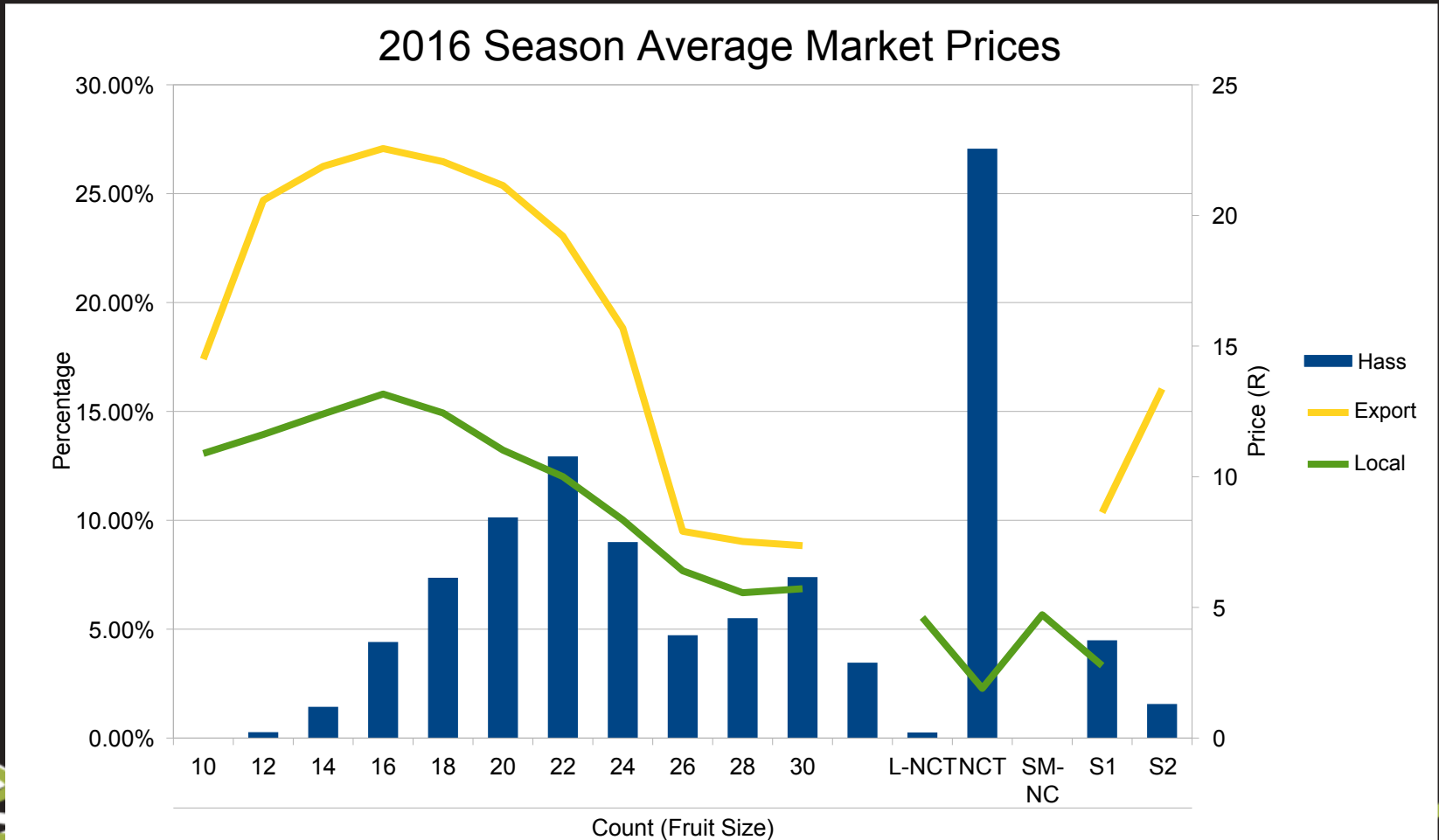
90
allesbeste
Boerdery. Kweekery. Padstal
90 PASSIEVOLLE JARE

 Maluma
avo

Fruit size as quality factor

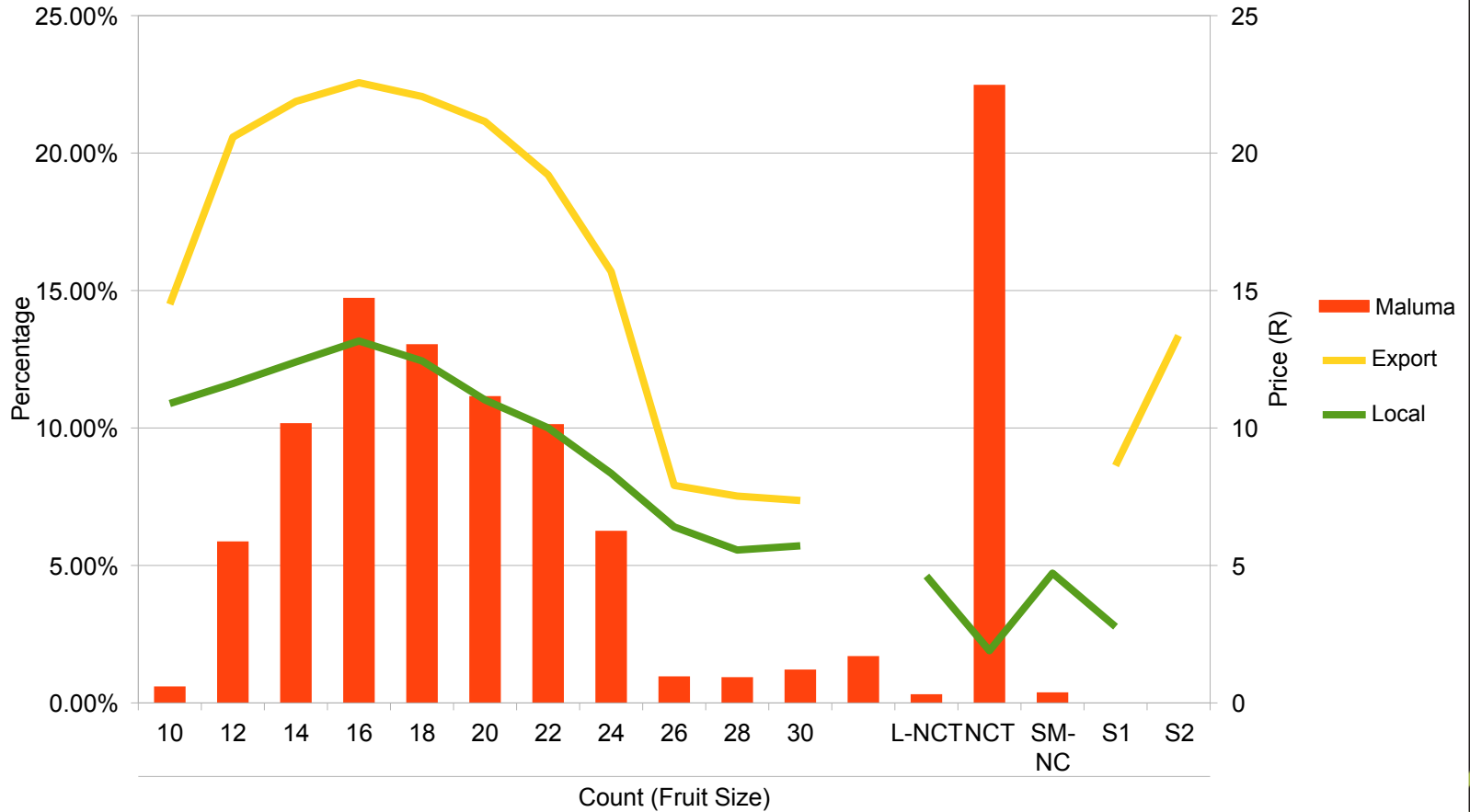
- According to earlier definition of quality, a quality factor can be defined as :
 - A factor that discounts price in terms of some reference price.
- Price discounting takes place according to fruit size.
- Therefore, fruit size is a quality factor.
- It can be concluded that fruit size out of spec should be considered a **quality defect**.

Count distribution



Count distribution

2016 Season Average Market Prices



7de
jaarlikse
Maluma
dag 2017

allesbeste
Boerdery, Kweekery, Padstal
90 PASSIEVOLLE JARE

Maluma
avo

Commercially Valuable Yield

- The yield of fruit of commercially valuable size. Can also be expressed as percentage of total production.

2016 Season Letaba Pakkers	Count 14 - 18 (Lovatt & Salazar-Garcia)	Count 12 - 22 (Wider spec)
Hass	13%	37%
Maluma	38%	65%

Commercially Valuable Yield

- The yield of fruit of commercially valuable size. Can also be expressed as percentage of total production.

2016 Season Letaba Pakkers	Count 14 - 18 (Lovatt & Salazar-Garcia)	Count 12 - 22 (Wider spec)
Hass	13%	37%
Maluma	38%	65%

← GENETICS

Impact on returns

- Assumptions :
 - 15 ton/ha total yield
 - 65% exportable fruit

	Total return	Count 12 – 22 (Wider spec)	% of total return	Total yield	Commercially Valuable Yield	Commercially Valuable Yield ratio
Hass	R141 202.17	R95 861.10	68%	15 000 kg/ha	5 482 kg/ha	37%
Maluma	R195 857.43	R176 666.35	90%	15 000 kg/ha	9 771 kg/ha	65%

	Average price (R/kg)
Hass	R9.41
Maluma	R13.06 (+39%)

Conclusion

- Watch out! Good total yield figures (t/ha) do not paint the full picture and can be deceiving.
- Consequently, total yield per hectare is a rather meaningless figure in terms of returns.
- Commercially valuable yield should be calculated as the benchmark figure to determine success in maximising production and returns.
- Small fruit is a **quality defect** in the same way as external or internal quality defects.

What is YOUR Commercially Valuable Yield?



7de
jaarlikse
Maluma
dag 2017

90
allesbeste
Boerdery. Kweekery. Padstal
90 PASSIEVOLLE JARE

 Maluma
avo