COMPARATIVE ECONOMIC PERFORMANCE OF ARGOS KIWIFRUIT ORCHARDS
2003/04 – 2007/08

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Presentation Structure

• Discuss the economic differences amongst panels – returns, costs and measures of the “bottom-line”

• A more detailed look at “conventional” vs “organic” costs

• Compare with sheep and beef sector results

• Look at an alternate approach to examining economic differences amongst orchards
Orchard Financial Analysis Rationale

- Looking at the orchard entity as a single entity
- Capturing un-priced resources used in production
- Analysis as a single dataset with all variables in 07-08 dollars

Orchard Numbers

- 9 (8 in 02/03) Green orchards
- 7 (11 in 02/03) Organic orchards
- 6 (8 in 02/03) Gold orchards
  - 3 “gold only” (3)
  - 3 “combined” (5)
Description of ARGOS Kiwifruit Panels

- Trays per Hectare
- OGR/tray
- Effective area

- Green
- Organic
- Gold

All diffs sig 1%
Sig 5%
Kiwifruit Mean Financial Parameters 02/03-07/08

Gold significantly higher than Gr/Org (No Sig Diff)

No significant differences
low power

$Real 07/08

GOR OGR OWE COE COS NOPBT EOS

Green Organic Gold
Variability of Kiwifruit Mean NOPBT 02/03-07/08
Kiwifruit Mean Orchard Working Costs 02/03-07/08

Sig=1%
NS
Sig=1%
NS
NS
Sig=5%
NS

$Real 07/08

Cash
labour
Spray &
chem
Poll'n
Fertiliser
Vehicles
R&M
Overheads
Other
working

Green
Organic
Gold
Kiwifruit Mean Orchard Working Costs 02/03-07/08
Green and Organic only

<table>
<thead>
<tr>
<th>Category</th>
<th>Green</th>
<th>Organic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labour</td>
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<tr>
<td>Spray &amp; Chem</td>
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<tr>
<td>Pollination</td>
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<tr>
<td>Fertiliser</td>
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<tr>
<td>Vehicles</td>
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<tr>
<td>R&amp;M</td>
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<tr>
<td>Overheads</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Working</td>
<td></td>
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</tbody>
</table>

$Real 07/08

Sig=1% * Sig=1% * Sig=5% Sig=1%

NS

Sig=5% Sig=1%

NS
Variability of Sheep /Beef Mean NFPBT 02/03-07/08

-600
-400
-200
0
200
400
600
$Real 2007/08 per ha

Estimated means

Organic
Not Organic
Sheep/Beef Mean Financial Parameters 02/03-07/08

[Bar chart showing financial parameters for Organic vs Not Organic with significance levels and notes: Sig=1% Sig=1% Sig=1% Sig=1% NS NS Sig=5%]
Kiwifruit Summary of Panel Analysis

- Organic - lowest yields but highest per tray returns
- Gold - highest yields and intermediate per tray returns
- Gold - highest gross returns & higher costs than others
- No differences found in the financial bottom lines
- It appears that variability has more to do with the operator than the management system since within panels variation greater than differences between panel means
- Cost differences mostly expected consequences of Organic certification/management systems and higher yields of gold kiwifruit
Alternative Explanations of Differences

- Qsort analysis to sort farmers into groups based on the important factors in decision-making process

- **Kiwifruit**
  - Type 1 = “business group” - mostly post harvest
  - Type 2 = “lifestyle group” – More emphasis on environment and social factors

- **Sheep/Beef**
  - Type A = fewer connections, less emphasis on social/environmental factors
  - Type B = more connections, emphasise satisfaction, external factors, family and environment
### Management System by Farmer Type

<table>
<thead>
<tr>
<th>Kiwifruit</th>
<th>Type 1</th>
<th>Type 2</th>
<th>Unclassified</th>
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<tbody>
<tr>
<td>Organic</td>
<td>5</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Green</td>
<td>6</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Gold</td>
<td>5</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
<td><strong>8</strong></td>
<td><strong>7</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Sheep/Beef</th>
<th>Type A</th>
<th>Type B</th>
<th>Unclassified</th>
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</thead>
<tbody>
<tr>
<td>Organic</td>
<td>2</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Nor Organic</td>
<td>7</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>9</strong></td>
<td><strong>19</strong></td>
<td><strong>4</strong></td>
</tr>
</tbody>
</table>
Kiwifruit Financial Outcomes by Farmer Typology

![Bar chart showing financial outcomes for different farmers](chart.png)

- **GOR**: $35,000 (Sig=5%)
- **OGR**: $30,000 (Sig=5%)
- **OWE**: $10,000 (NS)
- **COE**: $20,000 (NS)
- **COS**: $30,000 (Sig=1%)
- **NOPBT**: $20,000 (Sig=1%)
- **EOS**: $10,000 (Sig=1%)

Type 1 and Type 2 farmers are represented by different colors in the chart.
Sheep/Beef Financial Outcomes by Farmer Typology

The graph shows financial outcomes for different factors such as CFR, GFR, FWE, CFE, CFS, NFPBT, and EFS for Type A and Type B farmers. The significance levels are indicated as Sig=5% and Sig=1%.
Summary of Farmer Type Analysis

• “Sticking to the knitting” appears to be the path to profitability

• On Organic and Green Kiwifruit orchards the higher revenues of Type 1 orchardists appear to contribute more to higher profitability than lower costs

• In the Sheep/Beef sectors it appears that higher profitability is achieved by tighter cost control rather than higher revenues