English cider apples & orchard systems

Neil Macdonald
Orchard Groundcare
Somerset, UK

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Outline

• Who we are and what we do

• A brief look at the history of English cider-making and the global cider market

• The apples our cider-makers want today, and why

• Varieties, orcharding systems

• Viability and future thinking
Who we are what we do

Neil Macdonald:

• Farmer, cider-maker, orchardist

• NACM (Pomology), Orchards Network of Excellence

• Nuffield Scholar 2015: “Orcharding for the Next Decade for the Cider Industry”

• Orchard management; 800 acres Somerset, UK
Cider-making in England

- Romans
- Monasteries
- Industry
- Cider houses
- 2006
Global cider production

National Shares of Cider & Perry, 2012

- 47% global production is UK = 1.5 billion pints p.a.
Yields since 1970s

1970s:
3.5 tons per acre - standard trees

1980s:
6.5 tons per acre - standard trees
13 tons per acre - bush trees

1990s:
9 tons per acre - standard trees
16 tons per acre - bush trees

2010:
20 tons per acre, (best 25) - bush trees
What our cider-makers want today

- Commodity production
- Volume in litres
- Bittersweet fruit
- Sugar, tannins, acidity

<table>
<thead>
<tr>
<th></th>
<th>Bittersweet percentage</th>
<th>Bittersharp percentage</th>
<th>Sweet percentage</th>
<th>Sharp percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acid</td>
<td>( \leq 0.45 )</td>
<td>( &gt; 0.45 )</td>
<td>( \leq 0.45 )</td>
<td>( &gt; 0.45 )</td>
</tr>
<tr>
<td>Tannin</td>
<td>( &gt; 0.20 )</td>
<td>( &gt; 0.20 )</td>
<td>( \leq 0.20 )</td>
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Varieties

- Traditional bankers
  Morgan Sweet
  Yarlington Mill
  Dabinett
  Michelin
  Kingston Black
  Browns
Varieties

- modern varieties
  - Katy
  - Gilly
  - Hastings
  - Fiona
  - Vicky
  - Three Counties
Varieties

- new varieties?

Taste
pollination
yield of liquid
high in sugar, acid
and tannin
robust
disease resistance

winter chill
adaptability
easy care
water stress
tolerance
systems
Orcharding systems

Rootstock options

- **M25** - vigorous apple stock, use for traditional standard trees
- **MM111** - vigorous apple stock, use for traditional standard trees
- **MM106** - semi-dwarf apple stock, use for espaliers and bush trees
- **M7** - semi-dwarf apple stock, use for bush trees
- **M9** - dwarf apple stock, use for dwarf bushes and cordons
- **M26** - semi dwarf apple stock use for bushes and multiple cordons
- **M27** - very dwarf apple stock, used for patio trees and step-overs
Orcharding systems

- **Planting options**

<table>
<thead>
<tr>
<th>Spacings</th>
<th>Tons/Ac</th>
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<tbody>
<tr>
<td>Standard cider 24 x 30 ft</td>
<td>10</td>
</tr>
<tr>
<td>60 trees per ac</td>
<td></td>
</tr>
<tr>
<td>Bush cider 8 x 18 ft</td>
<td>20</td>
</tr>
<tr>
<td>190 trees per ac</td>
<td></td>
</tr>
<tr>
<td>Dessert 2.5 x 12 ft</td>
<td>26</td>
</tr>
<tr>
<td>980 trees per ac</td>
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Orcharding systems

- Management options
Orcharding systems

- Harvesting options
Viability

• £7-10K per acre/payback year 7-8

• Full yield by yr 10/min 25yr investment

• Price per ton is priority/ yield per acre is next

• Inputs must be kept in line with yield

• System & size is key to cost control

• A long term contract is essential
Future thinking

• Shake & catch?
• New varieties - genetics
• Better juice extraction
• Over supply of eating apples!
• Bittersweet fruit - essential for the growth of the industry
Thank you

www.orchardgroundcare.co.uk

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