Future Orchards 2012
June 2010 Orchard Walk

“What we have achieved and what is my vision for 2012 and beyond?”
Where were we at the start of the FO1012 project?

- First orchard walk September 2006
- 5 year goal “there will be a major uptake of intensive orcharding for new plantings, while older plantings have been managed to provide maximum profitability to the orchard business”

- What did our orchard look like in 2006?
  - 34 ha apples 1 to 22 yo
  - 4ha 1yo intensive 2666 trees/ha
  - 30 ha densities from 800 to 1600 trees/ha
  - Pruning & training; all central leader, various styles including central axis an slender spindle.
1966 planting 450 trees/ha
What did our orchard look like in 2006

Plantings mid 60’s to mid 80’s
- 500 to 800 trees/ha N.Spy or M7 rootstock
- Big tonnages but quality and size suffered as trees aged. Not suited to new varieties.

To mid 90’s
- Axis system M7 or MM111, to 1,200 trees/ha. Trees very tall and difficult to manage, over vigorous. Yields good but biennial bearing an issue with Fuji

1995 to 2002. densities to 1,600 trees/ha. Slender spindle with bottom layer; with some sort of support trellis. Rootstocks Mark 9 & Ottowa 3, later M26.
- Problems: Yields too low as planned height insufficient
  Early yeilds low – dwarf stocks not pushed hard enough.
Trees support too low – 2.4m
2002 planting; Cripps Pink/M26
4.25m x 1.7m  1384 trees/ha
What changed from 2006?

- 4ha planting in 2005 @ 2666 trees/ha (GS & Cripps Pink) became monitor block VC-45
- Fertigation of young trees
- Correction of errors at planting. ie too many branches too low
- Training of branches below horizontal
- Older Blocks:
  - More height needed to obtain yields to 80 tonne/ha in higher density plantings
  - “Rolling over” tops to below horizontal calmed vigorous plantings which were becoming unmanageable
  - Use of Regailas™ growth regulator
  - More aggressive spray thinning – use of ATS – Fruit Counting
  - An integrated Hail Net support and trellis system (Ron Gordon, Batlow Co-op) enabled more height in new & existing plantings
  - Introduced to Root pruning.
16yo Fuji on M7 4.5m x 1.8m
1200 trees/ha
Other Activities

Pruning Training Day
with John Wilton
(Agfirst)
Large lower branch removal
Production

Bins

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<th>Year</th>
<th>2005</th>
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• Trip to Batlow

• Planting Jazz tm at Montague Batlow
Contact with other growers (networking?)
• Trips to New Zealand (2)

• Brookfield Gala, Hoddy’s orchard, Nelson Area
An “Add-On” Muirs “Precision Orchards”

Monitoring of young tree growth

- **Jazz- Second Leaf**
- **M9 PAJAM2** 3.33m x 1m replant, fumigated Netted in 2010
Have we achieved the aims of the FO2012 project; or will we by 2012?
Are we more competitive?
Are we in a position to compete with imported fresh apples?
2012 and beyond?

- Predictions always difficult, especially about the future.
- I am no more qualified than anyone in the room to make them about the pome fruit industry.
- I would like to predict a stronger industry based on the technology we have acquired, plus new technology such as robotics with 2-dimensional row form and so on.
- It is difficult to be that optimistic in today's environment: high labour costs and a difficult retail environment provide a challenge which maybe can only be overcome with innovation eg the France “tree wall”.
- It is difficult to see a successful business model when varieties and strains are quickly superseded by redder versions, requiring costly orchard replacement.
- Is achieving “World’s best practice” going to be enough?