How long can we keep doing the same thing?

FUTURE ORCHARDS – July 2015
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Insanity is doing the same thing over and over again and expecting different results.

- Albert Einstein
Topics for discussion

• Background
• Phase 1 - The need for change
• Phase 2 - A shift in focus
• The Future Orchard
• It’s just a numbers game
• Summary
Background

• 72ha or orchard – Lardner, Gippsland. Property at Hoddles Creek also.
• Vertically integrated through 9mile Fresh
• Farm originally planted in 2001 to service Coles supermarket
• Original planting - Gala, Granny Smith, firmgold and Golden Delicious
• I arrived in 2004 when the oldest trees were 3yrs old
• Trees had no irrigation for the first two years...
• Grown on clay loam/deep red soils
• Annual rainfall 1000mm
Phase 1 - The need for change

- Very quickly we had ‘upside down ‘ trees – worst two limbs were being taken out every year - tree crept upwards.
- No light, no buds
- GS had all crop in the top, small fruit in the bottom
- Black Spot problems
- Giving away yield
- Spent 4 years turning them around
- Expensive lesson learnt
- Compounded by low net height
Phase 1 - The need for change – cont.

• Focus was shifted to addressing branches and making them more productive rather than cutting them out.
• We needed to decrease limb rub, russet – ultimately address packout
• Trees were straightened up
• Vigour control was increasingly front of mind
• Harvesting light was the new goal
• Began investing in our staff also – training etc
Phase 1 - The need for change – cont.

WE WERE STILL LAGGING BY NATIONAL STANDARDS

chart by amcharts.com
Phase 1 - The need for change – cont.

AFTER 6 YEARS WE WERE BACK IN THE GAME

chart by amcharts.com

GRANNY SMITH
Phase 2- A shift in focus

• Saw our production and packout plateau a little
• Began to reflect on what others were doing – Witchell’s etc
• Increased level of industry engagement – Future Orchards
• Began to travel – Trip to Washington State pivotal
• Frustrated with the inconsistency from tree to tree with 3D trees – asked myself “how long can we keep doing the same thing”?
• Very hard to simplify any tasks with a casual work force on spindle
• Gala were not optimised
• Began looking at new varieties for the farm
HARD NOT TO SEE THE ADVANTAGES...
Phase 2- A shift in focus cont.

- Formal systems looked very interesting – needed to see for myself
- Uniformity and simplicity of system was attractive
- Could see potential for improved packout
- Began researching formal systems – many to chose from
- Couldn’t get the Auvil concept out of my mind
- Planted trial blocks on farm reviewing double row 2D and V trellis 2D
- Broken down into km of fruiting wood to help understand potential
Phase 2 - A shift in focus

• These systems would accommodate existing and future labour saving technology such as platforms
• They would allow us to grab someone off the street and train them up on the system very quickly
• 2D systems would increase our tree efficiency
• Our productive canopy per ha could be nearly doubled under this system
• Our staff loved it from day 1! Don’t underestimate the significance of this point...
STILL NEED TO MAKE THE OLD BLOCKS PAY AND PLATFORMS HAVE ASSISTED DRAMATICALLY ALL EXISTING 3D TREES ARE NOW PERFORMING CLOSER TO WHERE THEY SHOULD BE BY NATIONAL STANDARDS.
Buckeye Gala

STARTING TO GET OLDER BLOCKS CRANKING
The Future Orchard

• Like all farms the evolution is continual
• We are getting close to locking in the Future Orchard design for Battunga Orchards
• Double row, vertical, 2D – confident it is the way forward
• Have some new trees in the ground under this system
• Have some older orchard converted to this system – see photos
• Wires 40cm apart vertically and horizontally
• No more posts required, but extra wire and splitters
The Future Orchard cont.

• This system will be 3,030 trees/ha
• Have 66km of fruiting wood
• Be 4.2m tall
• Be managed predominantly by platforms
• Will capture a large % of the available light
• Be grower/worker friendly
• Productive and efficient
• Capable of high yields of high quality fruit
• Must be simple! Too hard on a big farm...
It’s just a numbers game

• Everything we do on the farm has to pencil out
• We collect huge amounts of data from our farm regularly
• All blocks are monitored through OrchardNet
• We benchmark blocks both internally and nationally
• Allows us to identify problems quickly
• Data has assisted in varietal selection – what’s paying?
• This year we will have packout and individual financials for all blocks
• Data drives pruning and crop loading decisions
It’s just a numbers game cont.

• Data tells us that platforms over ladders and increased yield are our biggest drivers for improved profit

A full pass over the 2D trees including taping, pinching out shoots, shoot ripping etc. costed out at $3,400/ha on platforms.

Previously one season we did this with ladders and it cost $22,500/ha!

You would be mad to grow this system without platforms!
Summary

• If you’re sitting still in this game you’re going backwards
• Travel to see what’s possible and adapt
• On farm trials are essential!
• Ask yourself if we can keep doing what we are doing? Is $0.25/kg to hand thin a crop going to be acceptable in 2025?
• Pick a system that is ready for future technologies
• Know your numbers and half the job is done
• This is all work in progress … no guarantees in orcharding
THANK YOU