



Future Orchards 2012

“a roadmap to an internationally competitive apple and pear industry”

Ross Wilson and Craig Hornblow

AGFIRST

May 2008





Location

- Climate
- Water Availability
- Soils
- Labour

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Climate Modification

- Netting providing protection against hail, sunburn, wind, drought stress, and birds.
- Irrigation water supply matched to production area (3-6 ML /ha).
- Frost Protection
- Strong support structures
- Reflective foils for colour enhancement



QL10~ Frost free,
netted, irrigation and foil

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Variety Mix

- Plant the best available today
- Variety must be able to perform in your microclimate
- Variety trends are forever changing (keep informed)
- Align with your market needs
- New varieties are endless

Variety Mix

| Variety | Management Strategy | Variety Manager/agent |
|----------------------------------|--------------------------|---------------------------------|
| Scifresh cv. (Jazz™) | Controlled | Montague Fresh |
| Delblush cv. Tentation™) | Controlled | Oztaste |
| Nicoter cv. (Kanzi™) | Controlled | Desmond Muir |
| Nicogreen v.Greenstar™) | Controlled | Desmond Muir |
| Caudle cv (Cameo™) | Controlled | Tahune Fields/Montague Fresh |
| Sweetie cv. | Open | ANFIC |
| Honeycrisp cv. | Open | Flemings |
| Fuji Brak cv. (KIKU™) | Trademark use controlled | ANFIC |
| Crimson Snow | Controlled | Oztaste/Tangara Nursery |
| Fiero cv. (Early Fuji selection) | Open | Tahune Fields & Tangara Nursery |
| | | |

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Variety Mix



| Variety | Management Strategy | Who is the Manager/agent |
|----------------------|---------------------|--------------------------|
| Apples | | |
| Gala (Buckeye) | Open | Flemings |
| Brookfield® Gala cv. | Open | Flemings |
| Gale Gale | Open | Flemings |
| Alvina cv. Gala | Open | Tahune Fields |
| TF Gala | Open | Tahune Fields |
| Galaxy Gala | Open | ANFIC |
| Cripps Pink | Open | Anyone can propagate |
| Ruby Pink cv. | Open | Tahune Fields |
| Rosy Glow cv. | Open | Flemings |

Nursery Tree

- Plan 2-3 years ahead
- Specify quality requirements with nursery (virus status, tree size and feathers)
- Understand the impact of planting a good tree on early yield and ROI
- Plant the best



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Pre-Plant Preparation

- Drainage, salinity, pH, fertility
- Treatment of SARD
- Soil cultivation that maximises rooting depth and soil/root contact is critical.
- Rehydration of tree and irrigation from day 1

Orchard System

- Have a clear vision and communicate with staff
- Simple systems are best
- Single rows 3-4m apart. V's have merit
- 2000-3000 trees/ha
- Dwarfing rootstocks
- Keep up with new technology



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Rapid Yield Accumulation

Target

| Year | Gross Yield (kg/ ha) | TRV (m ³ / ha) | TCA (cm ³ / ha) |
|------|-------------------------|------------------------------|-------------------------------|
| 1 | - | 1,000 | 4,000 |
| 2 | 15,000 | 4,000 | 15,000 |
| 3 | 30,000 | 7,000 | 30,000 |
| 4 | 40,000 | 9,000 | 40,000 |
| 5 | 50,000 | 11,000 | 50,000 |
| 6 | 60,000 | 13,000 | 60,000 |



3rd leaf CP achieving 50t/ha Italy

- Precocious dwarfing or semi dwarfing rootstocks
- High quality nursery trees
- Planted intensively (2000-3000 trees/ha)
- Superior management in Years 1 and 2 that aims to maximize canopy development (soil prep, water, weeds, fert, p&d,)
- Minimal pruning, and bending where required
- Tree canopy full of simple, calm fruiting units spread evenly throughout the whole canopy

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Pruning/tree architecture

- 60% light interception
- Tree height (single rows)
= row width \pm 0.5m
- TRV targets 10-12,000
m³
- Saw tooth effect
- Calm simple pendant
fruiting units
- No heading or heavy
shortening
- Prune to bud / branch
number



Pruning



Improved Tree Architecture



From
this



To
this

- o Calm simple fruiting units spread evenly throughout the whole canopy
- o No heading
- o Weak shortening
- o Fruiting units trained or allowed to drop into a flat or pendant position



Crop Loading

- Set target using TCA or historical crops
- Define block optimums with sub block trials
- Prune to bud nos, know your bud/fruit ratio
- Smart timely chemical thinning
- Simple hand thinning strategies

Harvest Management

- Ensure harvest timing is optimising eating quality and storageability and profit.
- SPI is the key maturity indicator (not foreground colour or pressure)
- Plan labour needs well in advance to ensure you have the “horsepower when needed”
- Colour enhancing strategies and Retain can help optimise harvest timing.



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Measure , Manage and Improve

- Climate monitoring, fruit size, soil moisture, pest and disease status.
- Calculate Block profit
- Calculate Orchard profit
- Benchmark Block and Orchard performance against your goals and your peers”

Our roadmap to the Year 2012 : Are you up for the ride?



Beyond June 2008

- APAL have a desire to continue FO2012 in some form
- 2 years in fruit growing is a very short time
- Australian industry is alive and well and moving up.
- Remember the cup can be half full or half empty. Your “Mindset” is the key
- Make a plan and go for it!
- AgFirst have enjoyed our involvement and thank you for your extremely positive feedback.
- We’ve had fun.



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Australian Government
Department of Agriculture,
Fisheries and Forestry



Apple & Pear Australia



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Thankyou ~ we hope to
see you again!



