

Future Orchards 2012

"a roadmap to an internationally competitive apple and pear industry"

Ross Wilson and Craig Hornblow

AGFIRST

May 2008







Future Orchards 2012





Location

- Climate
- Water Availability
- Soils
- Labour





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





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 TM)	Controlled	Montague Fresh	
Delblush cv. Tentation TM)	Controlled	Oztaste	
Nicoter cv. (Kanzi TM)	Controlled	ed Desmond Muir	
Nicogreen v.Greenstar TM)	Controlled	Desmond Muir	
Caudle cv (Cameo TM)	Controlled	Tahune Fields/Montague Fresh	
Sweetie cv.	Open	ANFIC	
Honeycrisp cv.	Open	Flemings	
Fuji Brak cv. (KIKU TM)	Trademark use controlled	ANFIC	
Crimson Snow	Contolled	Oztaste/Tangara Nursery	
Fiero cv. (Early Fuji selection)	Open	Tahune Fields & Tangara Nursery	





Variety Mix

Variety	Management Strategy	ngement 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







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









Rapid Yield Accumulation

Target

Year	Gross Yield	TRV	TCA
	(kg/ha)	(m3/ha)	(cm3/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



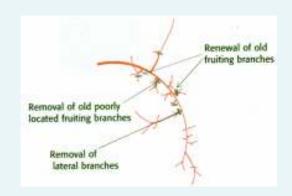
3rd leaf CP achieving 50t/ha Italy

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



Pruning/tree arcitecture

- 60% light interception
- Tree height (single rows)
 = row width ± 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









2012

Improved Tree Architecture



From this



To this

- oCalm simple fruiting units spread evenly throughout the whole canopy
- oNo heading
- •Weak shortening
- oFruiting 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.





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.
- Rememer 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 thankyou for your extremely positive feedback.
- We've had fun.





Thankyou ~ we hope to see you again!





