





Essential Orchard Practices to Enter the Asian Market

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Over view – why do it?

- No choice need another Class 1 markets for navels.
- Many believe qualifying for this market too expensive >\$1000/ha.
- Agree Trunk sprays /ha extra direct cost
- But tree management and canopy sprays - already current best practice
- Spend time how to intensely manage blocks to qualify for KCT -benefit outweighs cost
- The benefit - send fruit to a market with minimum price set when traditional markets in over-supply.



Grower -What To Consider?

- Recognise you do not send all your fruit to this market
- Look at the variety and block size, how to manage?
- Fruit size range to produce on the tree- high percentage of 75mm to 90mm
- Pests of concern and orchard practices
- These markets require block registration - DAFF
- Fails - out for the season
- Who will pack and market it to KCT - special packing requirements to block registration.
- Pests are a moving target all season - MUST MONITOR!!

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Grower Costs Pre Harvest

- Skirting by Hand \$150 - \$400/ha (1 - 2 times)
- Pruning incorporate cuts to lift skirt height
- Machine skirting \$150/ha (do it once but HIGH!!!)
- Trunk sprays \$60-\$70/ha X 1 (5 X; ex. labour cost)
- Canopy sprays \$280 - \$540/ha (2 X, product dependent; but required for other pests)
- Full range KCT cost from scratch - ~ \$7-800/ha
- 40t/ha @ 10 cartons/bin = \$0.70¢ per carton (worst case scenario)
- Key is to produce fruit of sufficient sizes to pay for it.

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Management – Systems Approach

- Prevent FRW moving into tree
 - Using a trunk barrier
 - Chemical Applied Band
- Skirt trees high:
 - Not touching ground from October until harvest (80cm+)
- Weed control:
 - No contact with foliage
- Trunk Spray - start Nov./Dec.
- Apply appropriate controls for other pests of concern



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Skirts Make Them High Early Season


- Cutting skirts high good crop regulation
- Kaolin Clay to confirm coverage & ID over spray



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Main Pests of Concern -insects

- Snails
- Fullers Rose Weevil
- Mealybug
- Difficult to find!!!!
- Red Scale
- LBAM
- Rust Mite



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Main Pests of Concern - pathogens

- Brown Rot
- Greasy Spot
- Septoria
- High canopy skirting and copper sprays a must!




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FRW Consequences

- FRW the stumbling block
- FRW leaves evidence behind difficult to remove
- Pre- clearance inspection rigorously search under calyces and navel ends.
- Packing more intensive and demanding – traceability and separation is critical
- Presenting a consignment with other growers has severe implications if it fails



17/05

Refresher of FRW

Moves within the tree, rarely leaves the tree – but will drop out of canopy if threatened and move back up

Lay eggs under calyx

Adult Emerges

Pupae in soil

Larva fall in soil feed on roots

Monitoring- MAT Vs Fruit Sampling

- Demonstrates how just testing fruit alone for FRW under calyx can be missed
- Use of the mat very important to find them – include with IPM
- Decision for course of action.
- Under current assessment criteria more likely to find them

In Orchard Distribution

5 fruit sampled per tree:
2008 24% (trees) – 7.5% (fruit)
2009 (51% & 17% 2009)

1 m² tree shake:
2008 63% trees
2009 68%

FRW Project 2008-09 Peter Crisp et al; PIRSA

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Field Monitoring

- Monitoring and record:
- Registered Crop Monitor – qualifying assessment
- DAFF audit inspection - zero FRW for China

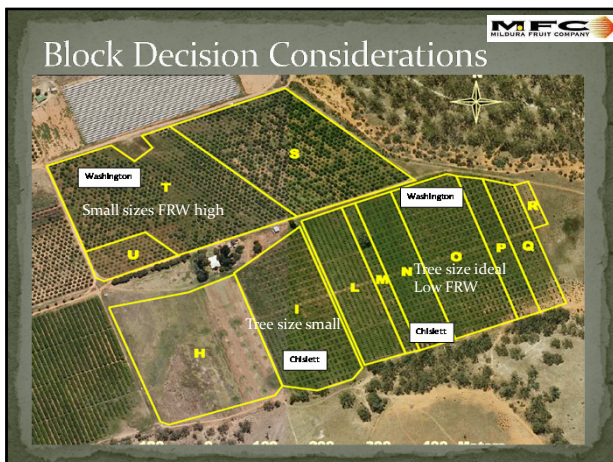
Early Season March/April September

Early Season March/April September

Work Backwards -Block Decision Matrix

FRW Status	Orchard Practice		Fruit Size Potential		Tree Canopy Size		Patch Selection Comment
	Skirting Pressure	Trunk spraying+ Other treatments	Good	Poor	Small*	Large	
High	✓	✓		✓	✓*		Find another patch with better size potential and less FRW
High	✓	✓	✓			✓	Consider if returns on investment is justified
Low	✓	✓	✓			✓	Include this patch into program
Low	✓	✓		✓	✓*		Find another patch with better size potential
No Evidence Found	✓	?	✓			✓	Include this patch into program
No Evidence Found	✓	?	✓		✓*		Consider if skirting can be done to AQIS requirement.
No Evidence Found	✓	?		✓	✓*		Do not consider in program

* small canopy size growers unlikely to skirt trees high enough



Suggested Spray Timing




- Spray only if it necessary
- You are only going to know if you do the monitoring
- For high pressure every 6 weeks from November till April/May
- Can be later if harvest not until August /September




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Program Similarities – Been Here Before

- This program is still in it's infancy
- But it is like the early stages USA (LBAM and SBS)
- Take time for growers and Packer/Exporters to adjust
- FRW are a more dynamic animal so we need to learn more.
- Trunk & canopy spray for FRW short term – harsh on Beneficial's and flare ups
- As industry still need to invest R&D!!!!



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Take Home Message

- Remember it only takes one FRW to knock out the consignment/ container
- “Aim is to not have FRW under the calyx at all” – simple as that!!!!



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