

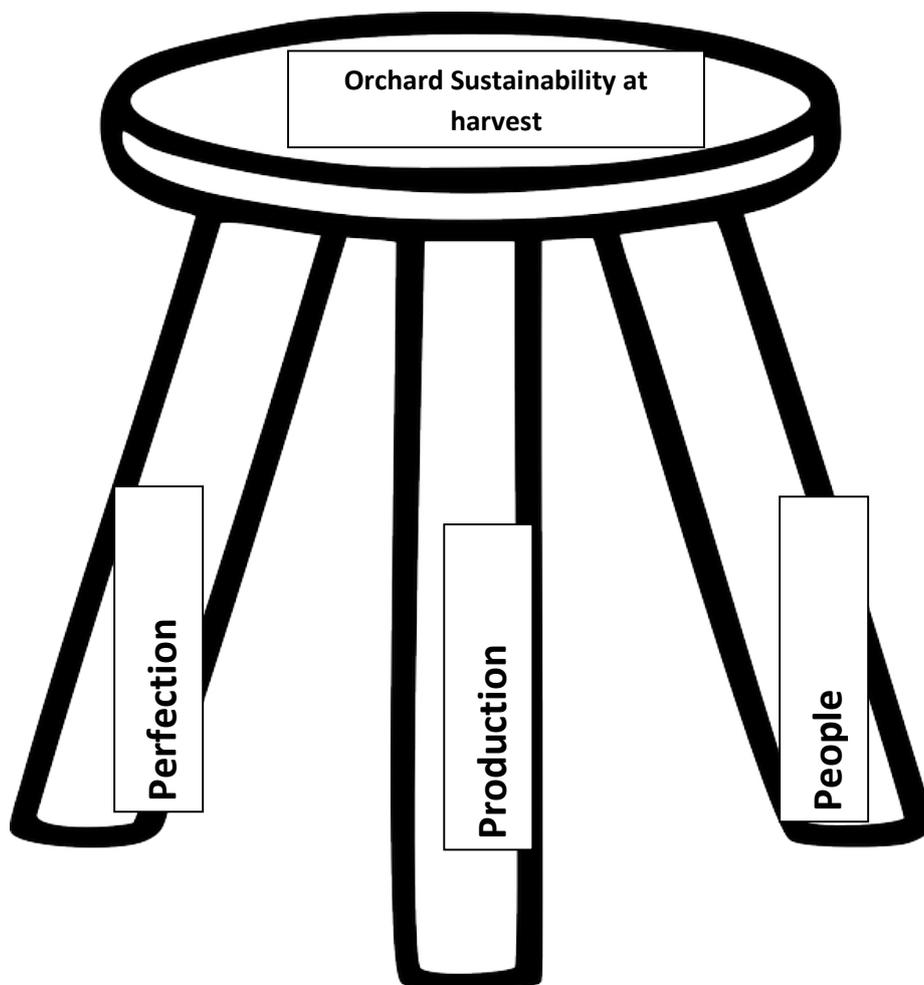
Future Labour – Harvest January 2016

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These notes are intended to support the power point presentation and field walk discussion carried out during the pre harvest 2016 round of grower meetings. The power point presentation also contains photos and figures that demonstrate the text.

To ensure financial sustainability of orchards, harvest management requires a combined focus on market acceptable yield (Perfection), productivity influencing costs (Production) and the people required to make it all happen (People).



If any one of these stool legs is not correctly managed the entire process is likely to seriously wobble or fall over.

Harvest labour management is a key factor in orchard sustainability.

We can't change what we do not measure – How do we keep score?

Focus on ways to get the best out of each unit of labour used in our orchards;

- Define what you need to measure – eg fruit quality parameters, costs, output time, employee motivation....
- Measure these key performance indicators
- Identify where improvements can be made
- Assess the cost of change vs reward to be gained
- Introduce appropriate improvement solutions

Improvements can be short term or long term;

- eg – staff training vs orchard re-development.

Or at different times during the season;

- eg - pre harvest solutions vs during harvest – choosing to pick with size rings during harvest to remove small fruit vs. late thinning of small fruit pre harvest to prevent the need for picker decisions.

Harvest Output Goals = *Perfection * Production * People

Perfection - Harvest fruit to achieve the optimum recovery of targeted quality fruit

- Quality is defined by the market and can vary between different markets – Target and supply the market that will give you the best return for each individual block – juice vs class 1, short vs long term storage. Identify this before harvest and adjust your harvest labour management accordingly.
- Minimise waste – Optimise the fruit recovery for the market you are targeting – Ensure pickers are picking all of the fruit they should be picking and only the fruit they should be picking, make sure each picker is doing the same job. Keep score – how are you going to ensure this is actually taking place.
- OrchardNet Profit data – Pink Lady 104T/ha @ 66% Packout **\$78,583** vs 95T/ha @ 85% Packout **\$90,414**
= \$49.91 per bin extra revenue - QC cost possibly \$5 per bin max

Production - Harvest fruit focussing on costs and the greatest financial gain for the fruit.

- To minimise cost you must maximise picker productivity, maximise the market acceptable fruit harvested by motivated and efficient pickers – Keep score.
- Identify the appropriate KPI's - market acceptable recovery % may be more financially significant than picker bin price.

People - Harvest fruit that achieves successful outcomes for the pickers and harvest management staff.

- People are key to success during harvest –To ensure the fruit is harvested correctly requires the correct numbers and quality of picking and support staff.
- For workers to perform at their optimum – they need motivation, skills, training, physical ability and fruit to pick. Individual performance information is key to picker motivation.
- Ensuring legal requirements are met such as worker safety and pay rates are also an essential KPI's.
- Guaranteed supply of quality labour when required is a key driver of change in Orchards across the world.

Perfection – Harvest Quality Improvements and Labour

Is the fruit that is being picked matched to the required quality standards of the target market?

Are the target market quality parameters actually defined and understood from market to the picker?

- Maturity / colour / size
- Fruit damage - hail / frost / pest & disease / bruising / russet / sunburn
- Storage risk / issues

What influences the parameters above? What can be done to improve perfection?

The less decisions that a picker has to make, the more effective and efficient they become.

Perfection – Maturity / Colour / Size

2016 Harvest season Options-

- Know the market requirements
- Aim to achieve colour and required size before maturity – Reflective mulch / crop load / irrigation / nutrition / vigour.
- Make sure maturity is being well monitored and all staff are well trained (colour etc).
- Picking staff must be well supervised – what is being picked and what is being left behind.
- Collect good information to make improvements for the future.

Longer Term Solutions -

- Better colour strains / genetics.
Visit APAL webinars <http://apal.org.au/member-login/webinars/webinar-optimising-harvest/>
- Canopy design / management for light.
- Minimise variability – tree to tree and within tree.

Perfection - Fruit damage – Pest & Disease / Russet / Bruising...

2016 Harvest season Options-

- Know the market acceptable allowances.
- What is the short term management solution? Sorting in the field, bruising checks...
- Keep all staff well trained and supervised.
- What caused these issues and how will they be improved in the future?

Longer term Solutions -

- Covers for birds / hail / sun.
- Frost protection.
- Pest and disease control options.
- Where is bruising happening and why.
- Russet mitigation options.

Perfection - Storage quality issues

2016 Harvest season Options-

- Assess the block risk.
- Use the block risk assessment to build picking management plans that maximise fruit quality.

Longer term Solutions

- Understand what is causing fruit quality issues and how improvements can be made.
 - Tree vigour
 - Nutrition
 - Tree to tree variability

Production – Maximise productivity and minimise cost with harvest labour

Ensure each tree has the maximum amount of market acceptable fruit

- ***Excellent trees are easy to pick***
- ***Experience suggests a picking range of between \$48 and \$70 per picked bin***

Make sure the harvest in each block is done as efficiently as possible

- Well trained and motivated pickers
- Minimal travel within tree and to the bin

Production - Maximum pickable fruit / tree

2016 Harvest season Options-

- This is a combination of all of the quality management inputs.
 - Maturity / Colour / Size / Fruit Damage / Storage risk.
- Minimum required number of picks to still achieve required quality.
- Excellent trees that allow for minimal picker decisions

Longer Term Solutions -

- Develop high quality, high yielding canopies with consistent fruit - within tree, tree to tree and year to year.



Production - Ensuring picker efficiency

2016 Harvest season Options-

- Keep the required picker decisions to a minimum.
 - Groom trees for poor quality pre harvest.
- Make sure the pickers are well trained in picking efficiently
 - <http://apal.org.au/member-login/webinars/webinar-picking-techniques-fruit-lineup/>
 - <http://apal.org.au/member-login/webinars/webinar-picking-techniques-bag-setup-and-bin-filling/>
 - <http://apal.org.au/member-login/webinars/webinar-picking-techniques-picking-and-fruit-handling/>
 - <http://apal.org.au/member-login/webinars/picking-techniques-ladder-work/>
- Keep the travel distance from picked fruit to final harvested unit (bins etc.) to a minimum.
 - Ensure good harvest training (see APAL resources).
 - Good bin placement by tractors, etc.
- Minimise picker fatigue

Longer Term Solutions -

- Keep the required picker decisions to a minimum.
 - Ensure good consistent fruit quality with good genetics and tree structure systems (canopies).
- Keep the travel distance from picked fruit to final harvested unit (bins etc.) to a minimum.
 - Look at harvesting options – Trailers / platforms canopy arrangements.

- Minimise picker fatigue.
 - Picking systems, platforms, trailers, canopies...



People - Harvest Labour availability, job satisfaction and compliance

- Pre plan to attract and secure good quality harvest people to ensure all fruit is picked correctly.
- Identify the key drivers of the harvest staff.
- Make management decisions to match up with the key drivers and motivators of the pickers.
- Understand and meet all legal obligations – Health and Safety, pay rates.
- Can it be made easier?
- How do you give the pickers the best price possible but keep the picking cost per class 1 unit as low as possible?
- What are you using to “keep score” on the people part of Harvest?

People – Staff availability

2016 Harvest season Options-

- Finding a good pool of high quality keen picking staff is critical.
- How do your pickers find you?
 - Word of mouth, social media, ads....
- Who are your preferred pickers?
 - Grey Nomads / backpackers / locals / families / contract picking teams / international workers....
- How can you encourage good pickers to return year after year? Are you measuring this?

To encourage people to want to come back or tell others picking for you is a good choice you must make the picking experience as enjoyable and successful as possible

Longer Term Solutions -

- Grower group, Industry or Government employment solutions or schemes

People – Staff enjoyment, motivation and engagement

2016 Harvest season Options

- Make the picking job as easy an enjoyable as possible (Innovation).
- Maximum availability and recovery of market acceptable fruit drives up potential returns.
 - Potentially greater pickers \$.
 - Lower cost per kg of market acceptable fruit.
- How happy are your pickers? Why? (Inspiration).
- Who are your pickers and what spins their wheels? (Motivation).
 - Money?

- Sports?
- Food?
- Fun?
- Praise?
- Recognition?
- Pickers need to believe they are being fairly rewarded for the work they are doing.
- If pickers are not doing a good job (quality etc) they need to know this also.
- **Good pickers need to be well looked after.**

People – Picker compliance requirements

2016 Harvest season Options

- Worker safety is extremely important.
 - Pickers need to be well trained and aware of potential risks (tractors / ladders).
 - Correct picking techniques and systems are positive for all.
 - Fatigue is a risk that needs to be managed – keep an eye on work load / weather etc.
- Minimum pay rates also need to be met.
 - Pickers must be well trained and pay rates monitored.
 - **The easier the picking the more money a picker is likely to make.**

Longer Term Solutions -

- Grower group, Industry or Government training solutions or schemes (APAL website).
- Create orchards that are easier to harvest with maximum volumes of market acceptable fruit.
- Focus on reducing the requirement of people labour for harvest.
 - Total number of people
 - Technical skill required
 - Physical ability required

We need to focus on where harvest improvements need to be made and what are the correct solutions both in the short and long term.

