

Sunraysia growers information and communication workshop - May 2017

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Facilitator: Stuart Putland

Report editor: Steven Falivene

Workshop organisers: NSW Department of Primary Industries, Sunraysia Citrus Growers and Citrus Australia Regional Committee (Sunraysia).

Participant names: Cam Branda, Darryl Branda, Matthew Cottrell, Vince Demaria, Judith Geyken, Michael Hammet, Toby Hederix, Daniel Lazar, Tyson Milne, Trevor Radloff, Larry Simonetta and David Stevens.

Workshop background and aim

NSW DPI and the citrus industry wishes to improve the way citrus grower's information, knowledge and skills needs are serviced. A workshop was conducted to explore these needs. Progressive and innovative growers that had at least 20 years of expected industry service were invited to participate in the workshop (Figure 1).

The workshop notes will be presented to the next combined meeting of Sunraysia Citrus Growers and Citrus Australia Regional Committee (Sunraysia) to discuss strategies and options to use this information to plan and prioritise information delivery mechanism, topics and initiatives.

Figure 1 Workshop participants being facilitated by Stuart Putland.



Workshop notes

What changes have you seen in industry over recent years?

- There is a greater focus on quality. Markets demand blemish free fruit and fruit size in the optimal range. Previously price was paid on bulk regardless of quality, now quality has a major impact on price. As a consequence practices like pruning have become very important.
- Prices can fluctuate within a couple of weeks.
- There has been a varietal shift from Valencia to navel and mandarins.
- Production has become more technical e.g. fertigation and soil probes.
- Irrigation automation has made it easier to manage larger areas

In terms of your business; where you are going to, what things do you want to bring into your industry, where do you want to take your business?

(NOTE: At the end of this session participants were asked to vote on each of the sections)

Whole of orchard performance (priority votes: 12)

- Drone technology to scan orchard to identify problem trees and patches.
- Performance monitoring on a weekly daily or real time basis e.g. irrigation valves and soil moisture monitoring.
- Managing the data: Interpreting multiple sources of information (e.g. soil moisture, weather/Eto, nutrient status, pack-out, yield mapping using in-field bin scanners with GPS and irrigation output) to provide warnings and recommendations. Other data such as spray records can also be integrated.
- Time to start harvest: Better identify the onset of albedo breakdown or patches that will rapidly decline in fruit integrity and will require a quick harvest

Growing to specifications (priority votes: 10)

- Diversity of markets: markets can have different specifications (e.g. fruit size, & percent blemish). Need to ensure supply is able to meet these variable specifications across the whole market spectrum.
- Lower quality markets are available, but prices are too low to be viable.
- It is very important to select the right varieties to meet market demands.
- It is important for growers to see the fruit being sorted in the packing house so they can better assess their fruit quality.
- Chemical deregistration: Chemicals are being deregistered. There is a need to identify current chemistry (other uses or crops) that could be useful for citrus.
- Increased use of chemicals in recent years makes IPM more challenging.
- Improving shelf-life is important because Australia has medium to long shipping journey to most markets.

Climate outcomes (priority votes: 4)

- Weather /variable climate can pose a significant risk such as sun/heat burn, hail damage and frost.

- Water security: drought or an overall long-term reduction in water availability due to climate change (i.e. water available only on alternate days).
- Unable to obtain crop insurance and if it is available it is too expensive.

Improving productivity (priority votes: 3)

- Fine tuning the fertigation program to optimise quality i.e. adjusting fertiliser application to crop load.
- Matching irrigation design to soil profile; farm soil maps.
- Using the correct rootstocks for the soil type and variety combination.
- Pruning trees to make picking easier (smaller trees and spaced out branches).

Skills and training (priority votes: 3)

- It is difficult to obtain seasonal workers (i.e. harvest). Often workers are transient, unskilled and work in the industry for a few months. Improving training of seasonal workers could enable them to achieve higher income and a greater incentive to continue work.
- Also difficult to find skilled farm foreman / managers. The almond industry competes with the skill base.

Business and finance (priority votes: 1)

- Long term economic viability requires good business planning. There is a need to make 20-30 year projections to ensure a variety and production method is economically viable. It is expensive to make a variety mistake and then rework trees at year 7 to 10 (cost of rework and lost production income).
- Replanting is important to maintain the orchard at a good average productive age. It is difficult to plan and know when to start removing blocks and replanting. Often tree removal is done when a drought occurs. Almond companies conduct replant experiments now (e.g. tree density and new varieties) so when they need to replant in 15 years' time they have some indicator trials to help guide their decision.
- Growers need practical tools and methods on how to evaluate a block (production unit) and help determine when to redevelop.

Mechanisation & robotics (priority votes: 0)

- Gain in efficiency: Australia is a high-cost producer and we need to compete with lower cost producers. Efficiency improvement opportunities include: harvest aids i.e. picking platforms, mechanical/robotic picking machines and GPS automated tractors.

Biosecurity (priority votes: 0)

- Australia needs to maintain vigilance of exotic diseases such as Huanglongbing.

What is the best way to get knowledge/skills developed , talked about and used?

New research: On farm trials

- Trials need to be professionally managed (layout, replications and data collection) by a reputable organisation (e.g. state department of agriculture). There have been practices and products promoted to industry that has been based on sub standard trials (i.e. no controls, unknown data collection method).

- Need to have trials publicly reported and transparent (trial methodology and results) .
- It is very important to verify new knowledge in different situation or regions. For example some practices promoted in South Africa behave differently in Australia.
- There is opportunity to bring overseas experts to present in Australia.

Interactivity

- **Visual appraisal:** Inspecting trial results in the field is an important aspect of understanding and adopting new practices.
- **Networking:** Growers talking with other growers and seeing how they manage their farms help provide/share solution options and ideas to big and small problems. Some growers might be isolated on their farms and need an opportunity to personally network.
- **Field days:** A field day is a good opportunity to mix technical discussion (i.e. inspect field trials or guest speaker) with networking with other growers.
- **Conferences / Seminars:** These are still an important part of the information delivery mix. These are worthwhile if only two or three pieces of practical information is obtained from the event.

Digital

- **Freely available:** The internet has an extensive amount of information and it is accessed by young and mature growers. However it is sometimes difficult to assess its relevance and reliability.
- **Timely:** Reminders of key practices (e.g. apply copper) via email or SMS are helpful. It is also helpful to link these reminders to factsheets for further information. Cataloguing the alerts is important to review historical events.
- **Reliability:** Information needs to be reliable and reputable.
- **Video:** An option is to live stream or video events.
- **Packaging:** One stop shop website to have all reliable information stored and catalogued logically. Some government websites are hard to search, the website need to be organised so it is easier to find the information.

Information

- **Reporting:** It is often difficult to access previous research reports (i.e. difficult to obtain a copy), not published (i.e. forgotten in researchers filing cabinets) or the information has not been presented in an accessible, practical, grower friendly format. Sometimes research or important observations are not reported because of litigation fears (risk averse), there needs to be a way to convey all information to help growers make a fair judgement.
- **Core/base knowledge:** New growers entering the industry need the basic production information. This base information is important to get the foundation production principles correct. A formalised course or certificate is becoming more important (i.e. citrus TAFE course) as management is becoming more technically orientated, however the course needs to have practical knowledge.

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