



Almond Strategic Investment Plan 2017-22 – Some Early Insights

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17th Australian Almond Conference



HOSTED BY:
The Almond Board of Australia



SUPPORTED BY:
Horticulture Innovation Australia Ltd

Pullman Hotel Melbourne, Albert Park, Victoria
November 8th - 10th, 2016



Michael Clarke



Principal, AgEconPlus

Michael Clarke is an agricultural economist (University of Sydney 1987) and strategic analyst (Diploma of Business Strategy 2002) with more than twenty-five years' experience preparing industry investment plans. Michael commenced his professional career with the NSW Government in 1987 working as an agricultural economist providing industry analysis and policy advice. He spent two years in London with Cargill Technical Services before joining agricultural consultants Hassall & Associates in 1990. Michael went on to lead Hassall's Australian Consulting Division before leaving to form his own consultancy, AgEconPlus, in 2004.

Michael has prepared industry investment plans for a range of agricultural industries including Rice, Livestock, Pork, Poultry, Floriculture, New Zealand kiwifruit, honey bees and pollination. His experience in Australian horticulture has included review of Horticulture Australia Limited's performance against its first statutory funding agreement, economic evaluation of citrus export arrangements to the US and completion of all cost benefit analyses associated with the HAL R&D program between 2008 and 2014. Michael has developed investment plans for apple and pear, avocado, banana, citrus, nursery, summerfruit, turf and vegetables. He is currently preparing Strategic Investment Plans for Chestnut, Macadamia and Almonds.

Presentation Outline



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- What is a Strategic Investment Plan
- Approach used to develop the **SIP**
- Preliminary insights
- Next steps in SIP preparation

What is a Strategic Investment Plan



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- Hort Innovation and Aust Govt. requirement
- Guide R&D investment next 5 years
- **R&D levy** focused document
- Collective Industry Funds (CIF)
- Rural Research for Profit
- Not concerned with almond marketing

- 99% of production on Strategic Investment Advisory Panel (**SIAP**) or ABA Board
- But broad consultation:
 - A requirement of Government
 - Helps protect Govt Matching

SIP Preparation Approach



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Review Past Investments

Consultation

Discussion Paper

SIAP Review Priorities

Draft Strategy

Grower Validation

Early Insights: R&D Needs



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Pest and disease R&D



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- **Carpophilus beetle**
- **Carob moth**
- Orchard floor hygiene
- Learn from wine grapes
- Post harvest fumigation
- Minor use permits
- **Hull rot** – major impact
- Disease extent surveys
- IPM and IDM solutions
- Bird management technology
- Kangaroos and foxes



- Summerfruit imports
- Incursion preparation
- Current biosecurity plan
- Control options for exotics
- Keep Australia **Varroa** free
- Honey bee pest inspection
- Reduce long term dependence honey bees

Pollination R&D



- **Hive supply** and price
- Orchard design for pollination
- Hive quality technology
- Economics hive ownership
- Disposable hives post Varroa
- Hive movements post Varroa
- Forage opportunities for bees
- Self-fertile hive requirements
- Supplementary pollination and almond quality
- Honey bee alternatives

Planting material R&D



- **Breeding** – accelerated release new varieties
- Breeding – consumer requirements
- Breeding – cost benefit of private operation
- High health status mother plantings
- Rapid test protocol for budwood
- **Tree accreditation** scheme
- Rootstock – Aust performance testing
- Up to date propagation protocols
- Secure repository for genetic material
- Objective evaluation of varieties – new, old, imports
- **Horizon 3** – varieties, rootstocks

- Water use efficiency - **system maintenance**
- Fertigation and water modelling
- Micro-spray for disease control
- Water sterilisation for disease control
- Irrigation expansion in Murray Valley
- Policy research on water availability

Production systems



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- Breeding – closed shells, **dwarf rootstocks**
- Soil, water and nutrition management
- Precision application of nutrients
- Orchard design
- Tree architecture and physiology
- Harvest – emerging technologies
- Post harvest quality management

Harvesting and storage R&D



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- Smaller trees
- 'Catch and shake' harvesting
- Dehydration / **moisture management**
- In-field hulling
- Systems to cope with wet year harvest
- Economic feasibility of silo storage

- Value in current chips/scratches research
- Follow up research may be of value
- Limited support for developing Australian almond **specifications**



- Sustainability KPIs – assist **marketing**
- Energy efficiency – solar pumps
- **Soil health** – organic matter, structure, moisture holding, heat / disease control
- Soil health – replanting, marginal areas, managing without Methyl Bromide

Novel Technologies R&D



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- Precision agriculture for almonds
- Application of 'Big Data'
- Breeding program with bio-technologies
- **Robotics** to reduce on-farm labour

Industry development, data insights



- Extension – materials
- IDO resources
- New grower support – quality
- Industry statistics
- Communications
- Capacity building – students, **farm managers**, young leaders and researchers
- International engagement and collaboration – information exchange, R&D, marketing



- Bacteria contamination causes
- Moisture management tools and strategies
- Economic feasibility of silos
- Best practice **fumigation**
- Implement chip/scratch solutions
- New systems for bulk handling almonds
- Roasted almond packaging

Domestic Market R&D



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- **Health** benefit research
- Myth bust peanut allergy
- Quantitative / qualitative market research
- Differentiation of Australian almonds



- Research – emerging countries
- Monitor - new almond products
- Test – acceptability new varieties
- Interpret – supply demand balance
- Participate – ‘**Australia Fresh**’
- Market access – India, EU, Korea



- Committees – inform R&D, assist adoption
- **Linkages** – other investment programs
- Clear priorities – set using benefit cost
- Accountability – monitoring and evaluation reporting

Strategic Investment Plan : Next Steps



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Next steps



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1. **Contribute** via the Discussion Paper
2. Set priorities with SIAP
3. Benefit cost analysis of priorities
4. Monitoring and evaluation framework
5. Grower review and validation