

Horticulture Innovation Australia

FINAL DRAFT

**Processing Tomato
Strategic Investment Plan**

2018–2023

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Introduction

Horticulture Innovation Australia Limited (Hort Innovation) is the not-for-profit, grower-owned research and development (R&D) and marketing company for Australia's \$9 billion horticulture Industry.

As part of the role Hort Innovation plays as the industry services body for Australian horticulture, the organisation is tasked by the Australian Government with working alongside industry to produce a strategic plan for investment of levies in industry R&D and marketing activities.

This Strategic Investment Plan (SIP) is the roadmap that helps guide Hort Innovation's oversight and management of the processed tomato levy industry investment programs. The SIP lays the foundation for decision making in levy investments and represents the balanced interest and views of processing tomato industry stakeholders. The function of the SIP is to guide levy investment decision making.

Each individual levy industry investment strategy also speaks to the future growth and sustainability of the Australian horticulture industry, as a whole. The SIPs are produced under the umbrella of the Hort Innovation Strategic Plan, which takes a whole of industry view in setting its direction, as it considers broader agriculture government priorities for the advancement of Australian horticulture.

The process of preparing this SIP was managed by Hort Innovation and facilitated in partnership with the Industry Representative Body and the Strategic Industry Advisory Panel (SIAP). Independent consultants were engaged to run the consultation process, to gather the advice from stakeholders impartially and produce a plan against which the processing tomato industry can be confident of its strategic intent.

Hort Innovation has valued the support, advice, time and commitment of all stakeholders that contributed to producing this SIP, especially processed tomato growers and processors.

The processing tomato SIP

Producers and processors in the processed tomato industry each make voluntary financial contributions (levies) to the Australian Processing Tomato Research Council Inc (APTTC). The APTTC invests a proportion of these funds with Hort Innovation. The APTTC investment is matched dollar-for-dollar by government through Hort Innovation when used for eligible research and development (R&D) activities to a maximum value equalling 0.5% of the gross value of production of the industry, calculated as a four-year rolling average.

Hort Innovation has developed this SIP to strategically guide its investment of the collected processed tomato voluntary levy funds into the priority areas identified and agreed by the industry.

This plan represents the Australian processing tomato industry's collective view of its R&D needs over the next five years (2018 to 2023). It has been developed in consultation with Australian processing tomato levy payers through direct consultation with levy payers, attendance at an industry workshop and via consultation with Hort Innovation's processing tomato industry SIAP.

The process to develop this plan is fully described in Appendix 1. The people consulted in the preparation of the plan are listed in Appendix 2 and the documents referred to are listed in Appendix 4. Hort Innovation has responsibility for implementing the industry's strategic investment plan and will do so in consultation with the processing tomato industry SIAP. Both Hort Innovation and the panel will be guided by the strategic investment priorities identified within this plan. For more information on the processing tomato industry SIAP constituency please visit Hort Innovation's website (www.horticulture.com.au).

Section one: Context

Production

Growing

Tomatoes for processing are grown in Victoria, around Echuca, Rochester, Corop and Boort; and around Jerilderie in NSW.

Production peaked in the early 2000s at around 380,000 tonnes. It declined steadily thereafter to an average just under 200,000 tonnes before rising again in 2014/15 and 2015/16. Total industry production fell back again in 2016/17 to 184,000 tonnes (from 15 specialist grower enterprises), when harvest was late due to rain (Figure 1).

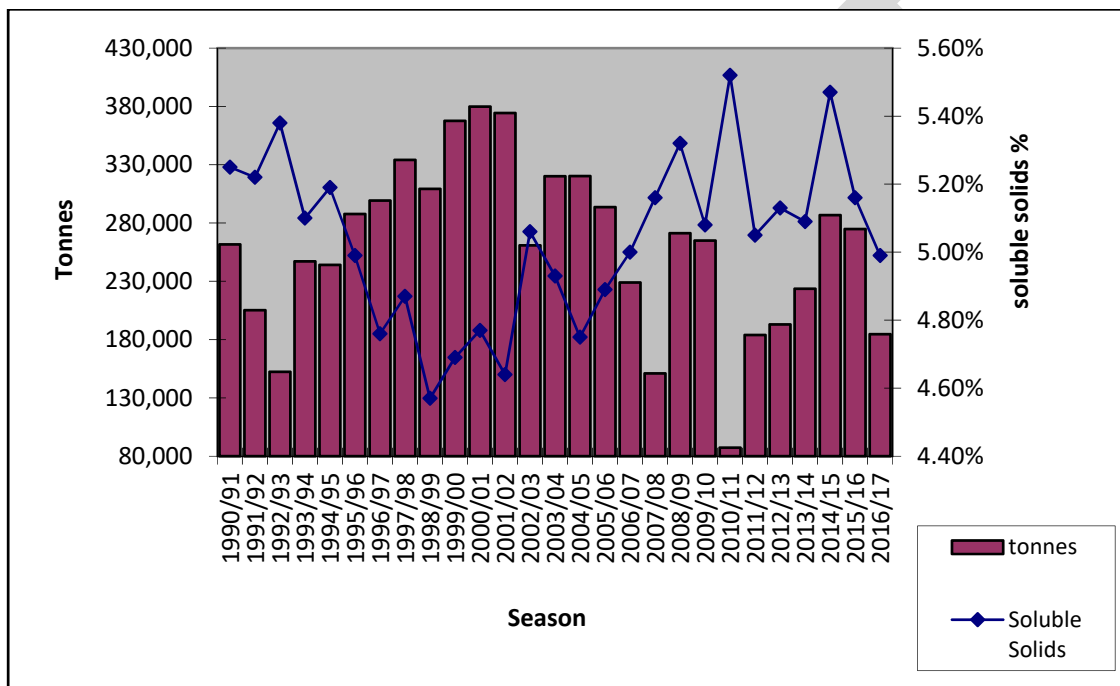


FIGURE 1. PROCESSING TOMATO PRODUCTION AND SOLUBLE SOLIDS CONTENT (SOURCE: APTRC GROWER SURVEY, 2017)

According to World Processing Tomato Council (WPTC) figures¹, Australia was the 16th largest producer of processing tomatoes during the period 2014-16. The largest producers were:

- USA (average 12,856,000 tonnes/annum);
- China (5,683,000 tonnes); and
- Italy (5,162,000 tonnes).

However, Australia is the third largest Southern Hemisphere producer² after Chile and Argentina (and similar to Thailand).

Variations in Australian production from year-to-year have been largely due to adverse seasonal conditions. Severe wet weather during harvest (late January to early April) can severely reduce the crop, as occurred most notably in 2011 when the crop was flooded. Weather poses a particular risk for the processing tomato industry given the confined location of production in Australia.

The decline in production since the early 2000s has been due to a range of factors including increased competition from

¹ WPTC estimate of tonnes for processing, update 1 September 2017, <https://www.wptc.to/releases-wptc.php>

² Defined as having a January-June harvest period

imports, a strong Australian dollar and increasing input costs reducing profitability.

In 2016/17, approximately 2,183 Ha of processing tomatoes was planted, 99.6% of which was under sub-surface drip irrigation. Eighty-six percent of the planted area was established using transplants (as distinct from seed). Yield averaged 97.5 t/Ha over the five years to 2016/17, although it was down in 2016/17 at 89.2 t/Ha. Yield has increased significantly over the last 35 years and now rivals that of Californian farms (Figure 2).

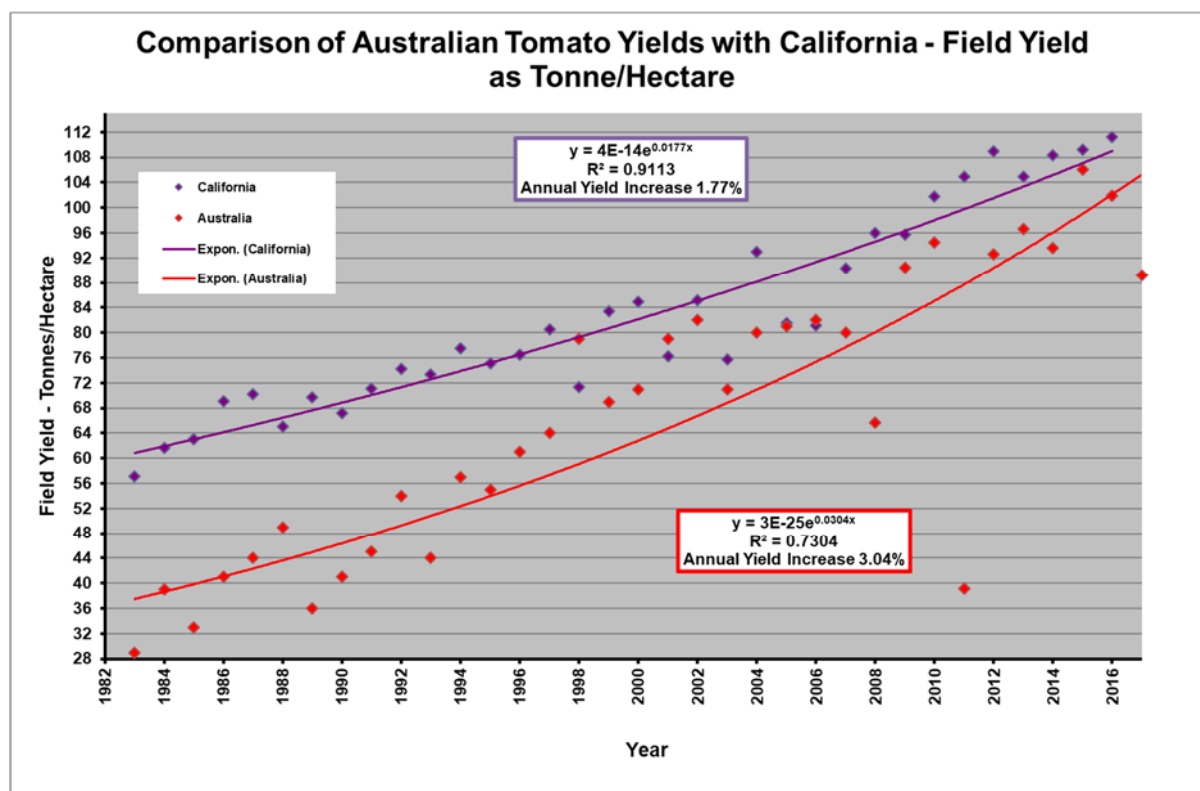


FIGURE 2. COMPARISON BETWEEN CALIFORNIAN AND AUSTRALIAN FIELD YIELDS OF TOMATOES (SOURCE: APTRC, 2017)

Growers produce tomatoes for two main processing paths: paste production (by far the largest destination) and peeling. All plant varieties are chosen for yield, extended field storage (EFS, i.e. ability of fruit to withstand deterioration in the field after ripening) and disease resistance. The key price drivers for producers are yield and Brix³ – that is, Brix/Ha.

For paste, the following attributes of the fruit are sought (in priority order)⁴:

1. Viscosity;
2. Colour;
3. pH – preferably <4.35, to reduce the need to add citric acid during processing;
4. Earliness / maturation; and
5. Brix – high Brix is preferred but there is an unfavourable correlation between Brix and viscosity.

For peeling, the following attributes are sought (in priority order):

1. Peel-ability – ease of skin removal with minimal evidence of attached skin;
2. Brix;

³ A measure of the total soluble solids (TSS), principally sugars (fructose), in the fruit

⁴ 'Cultivar selection criteria for the Australian processing tomato industry', APTRC

3. Colour;
4. pH – <4.5 is highly desirable;
5. Flavour; and
6. Texture – firm and solid to withstand handling and processing

Processing

There are three tomato processors in Australia:

1. Kagome in Echuca. By far the largest processor. Produces a wide variety of bulk pastes, purees and diced product ultimately packaged by secondary processors and sold under a variety of brands.
2. SPC Ardmona in Shepparton. Produces mainly whole and diced canned tomatoes.
3. Billabong in Jerilderie processes a small proportion of the crop.

Imports

Australian production of processed tomato products has been exceeded by imports of such products since 2007, imports having grown by 8.7% annually since 1996 (Figure 3).

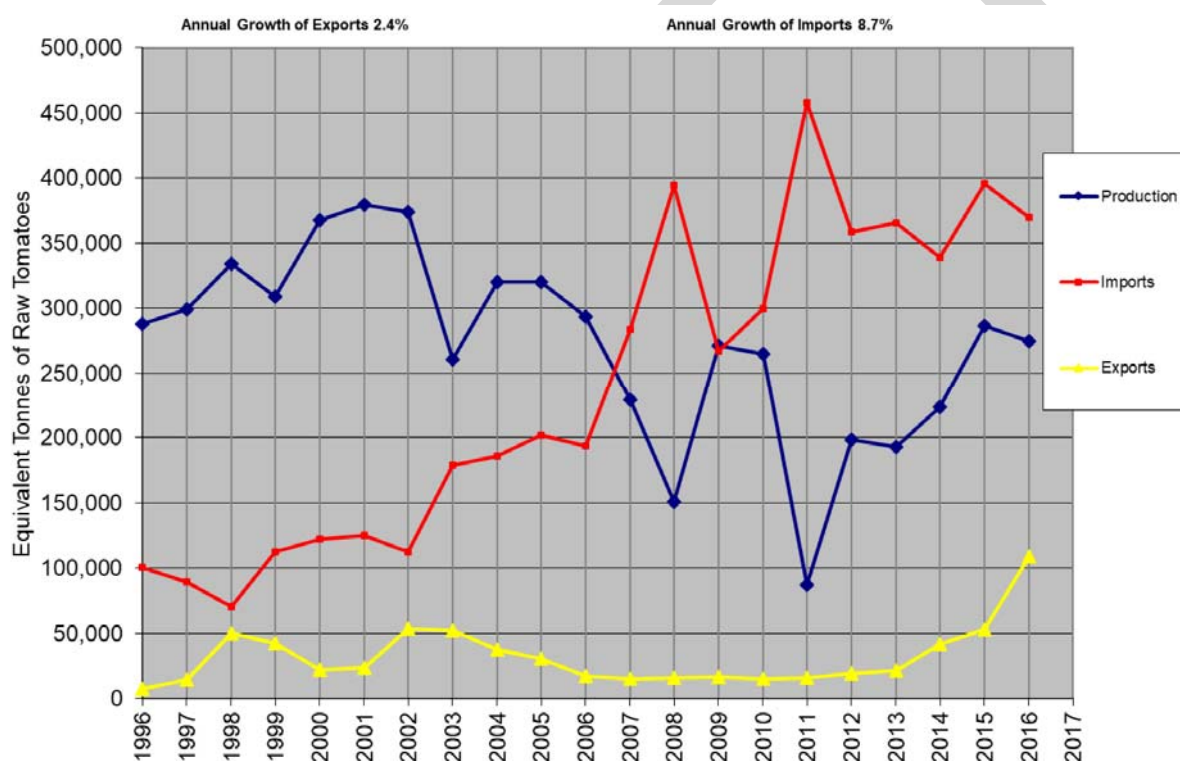


FIGURE 3. AUSTRALIAN PRODUCTION, IMPORTS AND EXPORTS OF PROCESSED TOMATO PRODUCTS (SOURCE: APTRC, 2017)

Importantly, import competition has been strongest in high-margin retail canned product. Import competition is strongest from Italy, the USA and China, depending on the product category.

Of all processed tomato product consumed in Australia, imports contributed 41% in 2006 compared to 69% in 2016.

Markets

Export Market

As shown in Figure 3, exports of processed tomato products have risen strongly since 2013, albeit from a low base. Exports represented around a third of production in 2016.

Major markets are New Zealand (whole/pieces, sauce/ketchup and juice), Japan (whole/pieces and paste/puree) and Thailand (paste/puree).

Domestic Market

Total Australian apparent consumption of processed tomato products (that is, production plus import less export volumes) has increased by around 50% over the last two decades (Figure 4). Total apparent consumption has increased by 2.1% per annum since 1998 but only by 0.8% pa since 2010. Per capita consumption has been steady since 2006 at around 23.5kg. Note that apparent demand is a crude measure, as year-end inventory levels are not taken into account and crop years do not completely align with calendar years. (The apparent spike and subsequent drop in consumption in 2015/16 in Figure 4 should therefore be ignored in favour of the longer-term trend.)

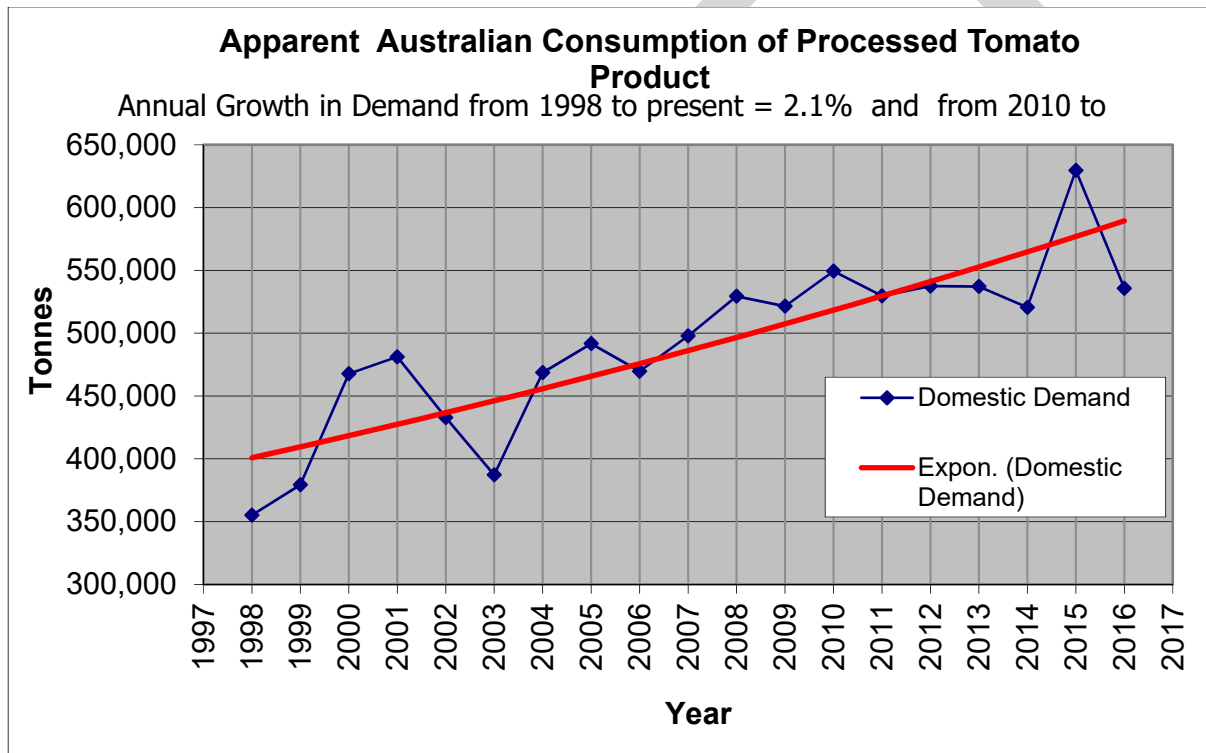


FIGURE 4. APPARENT AUSTRALIAN CONSUMPTION OF PROCESSED TOMATO PRODUCTS (SOURCE: APTRC, 2017)

Other operating environment issues

Over recent years the processed tomato industry has faced significant issues, the majority of which are outside of its direct control. These include:

- Increasing costs of production, especially in relation to inputs (e.g. labour, energy);
- Rising Australian dollar;
- Increasing exposure to and competition from imports; and
- Flat commodity prices.

SWOT

An analysis of the industry’s strengths, weaknesses, opportunities and threats (SWOT) was undertaken with stakeholders at an industry forum and tested with the SIAP. The following key themes were identified. It should be noted that these are not in priority order.

The processing tomato industry	
Strengths	<ul style="list-style-type: none"> • Efficient, especially in relation to irrigation • Small but proactive, cohesive, entrepreneurial and communicative industry • Tight geographic distribution (also a weakness) – enhances collaboration and facilitates innovation • World’s best practice – adapts quickly • Planning / scheduling well in advance • Well established Industry Development Manager (IDM) role and very capable incumbent • Clean green image • Mature relationship between growers and processors • Focus on quality • Global networks of major industry processor
Weaknesses	<ul style="list-style-type: none"> • Small industry – results in challenges to meet supply to markets, limited interest from agrichemical companies and difficulties getting new variety seed through customs and into Australia expediently • Tight geographic distribution (also a strength) – increases seasonal risk • Variability of production due to seasonal conditions (much more variable climate than other tomato-producing countries) • Spatial variability of yield, even within paddocks • Reliance on one seed producer • Variability in results of small plot trials • Limited options for crop rotations on drip tape, leading to continuous tomato cropping with gradual declines in yields • Lack of benchmarking data • Ageing fleet of harvesting equipment, concentration of harvesting capacity in one company • Don’t sell ‘clean/green’ well enough • Australian product labelling laws advantage imported over local product

The processing tomato industry	
Opportunities	<ul style="list-style-type: none"> • Reduce spatial variability in production – bring the whole crop up to yields achieved in some areas • Implement continuous improvement, especially in relation to quality • Develop new or review current chemicals • Increase adoption of new technology / innovation • Capitalise on changes in consumer attitudes (e.g. clean green, buy local – new country of origin labelling) • Undertake market research – consumer understanding / perceptions of taste • Develop alternative routes to markets • Develop a differentiated product offer • Develop new markets globally (e.g. organics, new varieties) • Increase the proportion of production exported to high quality markets (although maintaining supply will be a challenge)
Threats	<ul style="list-style-type: none"> • Declining availability and quality of labour • Declining availability of expertise in growing and processing – succession risk • Risk of reduced irrigation water availability and increased cost • Lack of capital • Increasing interest rates • Reducing margins – competitor and supermarket pressure, increasing costs of energy and other inputs • Increasingly stringent regulatory environment • Biosecurity – political / technical (e.g. tomato potato psyllid (TPP)) • Increasing climate variability and change • Rapidly increasing cost of thermal energy (gas) • Stronger Australian dollar • Increased competition from imports due to free trade agreements • Reduced pressure on supermarket pricing

Section two: Processing tomato industry outcomes

Industry outcomes

Industry Vision

- An innovative, collaborative and profitable processing tomato industry that provides consumers with consistently high-quality, great-tasting products.

SIP Mission

- To efficiently deliver innovative and effective research, development and capacity building solutions to support a sustainable and profitable processing tomato industry from producer to processor.

It is clear that input costs are highly unlikely to reduce. On that basis, to address the industry's Vision and Mission, it is critically important for the industry to focus on two key areas: increasing yield / Ha so that cost of production per tonne decreases and producing a higher-value consumer product (increased final product price – more product going into diced or crushed and less into paste).

To face these challenges, the industry has committed to the following directions by 2023:

- Our yields will increase;
- A significant portion of production will be exported;
- A proportion of production will be supplied into new value-added products;
- We will capitalise on our clean green image;
- We will be far more energy-efficient; We will rely more on automation of production; and
- We will be highly collaborative, with increasing cooperation and understanding between producer and processor.

To follow these directions, this plan seeks to deliver three closely-linked key outcomes.

OUTCOME 1

Build skills, capacity and knowledge in the industry so that the capability exists to implement RD&E and marketing outcomes and deliver the supply and quality improvements needed by the industry

The Australian processing tomato industry is small by international standards and in comparison with other agricultural and horticultural industries in Australia – in volume, value and geographic footprint. Cost of production is relatively high and climate variability is a major challenge. Few growers access consumers directly, doing so instead through two major processors.

Together, these factors mean that Australia will always struggle to compete on volume/price terms. The industry is more likely to succeed by targeting high-quality market segments in Australia and internationally. Such a strategy requires the supply chain to be highly collaborative and innovative, with processors identifying the most promising high-value market opportunities and growers delivering product to meet their specifications. The appropriate market intelligence, price signals and technical information need to flow between industry participants.

Whilst there will be a focus on developing higher-value markets, improving cost efficiency is also an imperative. Input costs are likely only to increase in cost/unit terms (e.g. water, power, labour) so emphasis must be on more efficient utilisation of those inputs and greater output (yield) to reduce cost of production per tonne of product.

The Australian industry has relatively limited resources to invest in RD&E. It also relies heavily on plant varieties bred overseas. On the other hand, it has a cohesive and collaborative culture. The greatest return on its limited R&D investment is therefore likely to come from validating, in the Australian context, new plant varieties, technologies and practices from around the world (Outcome 3) and optimising their adoption. The Industry Development Manager (IDM) plays an important role in both of these areas.

It is vital that skills, capacity and knowledge are developed not only in existing industry players but also new entrants.

Opportunities to support Outcome 1 include:

- Review, redefine but strongly maintain the IDM role to ensure that the RD&E program (Outcome 3) is delivered

- Continue to update producers on latest information in relation to quality of production, efficiency of production (water use, energy use), continuity of supply, clean green practices and managing new varieties
- Develop strategies to minimise harvest risk
- Undertake variety trials and report outcomes to producers
- Conduct study tours to expose growers and processors to the latest innovations globally (including attending relevant World Processing Tomato Council conferences)
- Compile and communicate relevant industry production and consumption statistics

OUTCOME 2

Provide support for new or enhanced market opportunities, both domestically and increasingly for export, in order to increase demand and support processing tomato prices

As described above, a market strategy of differentiation capitalising on existing and new competitive strengths of Australian product is most likely to deliver success to the industry.

While it is not financially possible for this SIP to develop a trade or consumer marketing strategy (as these activities are generally determined and managed by processors and their customers), there may be opportunities to undertake RD&E activities under this SIP that support the industry's marketing strategy.

Opportunities to support Outcome 2 include:

- Undertake trade research on market priorities / opportunities by region
- Identify opportunities for promotion of superior attributes of Australian tomatoes (e.g. clean green, nutritional benefits)
- Conduct trials of new products
- Provide other support for export and domestic market development

OUTCOME 3

Undertake RD&E to improve product quality (including new varieties) and increase productivity / reduce yield variability in order to support the industry's future viability and sustainability

There is a need for the processing tomato industry to both address existing constraints in supply chain productivity and optimise supply chain(s) to meet new, high-value markets with specific quality requirements.

Whilst the industry is not sufficiently resourced to conduct a major portfolio of basic research, it can undertake more applied work to test or validate new plant varieties, technologies or practices in the local context. This form of research overlaps with skills and other capacity development (Outcome 1) because it is generally conducted on commercial farms under commercial conditions in full visibility of industry participants.

The small amount of funding available for this Outcome requires investments to be very strategic and nimble (i.e. taking advantage of opportunities and 'failing fast' if they are not successful).

Priority on-farm research issues for Outcome 3 (not in priority order) include:

- Trial new varieties
- Understand and reduce yield variability (spatial, seasonal) – including considerations of soil health and hydrology
- Reduce labour requirement of weeding
- Improve pest/disease diagnostics
- At least maintain or improve access to chemicals
- More effectively manage drip tape
- Identify and optimally manage rotation crops
- Reduce energy costs, increase energy efficiency
- Increase harvesting efficiency and logistics
- Improve data collection and management, including digital connectivity

There may also be opportunities to develop new processing technologies or to conduct economic research (for example,

on optimising harvest logistics).

Section three: Processing tomato industry priorities

Industry investment priorities

The following industry investment priorities (or strategies) have been identified by industry. Possible deliverables are also listed. These are rated 'High' (H) or 'Medium' (M) priority.

The indicative allocation of resources is:

- Outcome 1 – 40%
- Outcome 2 – 20%
- Outcome 3 – 40%

However, the processing tomato fund is quite small. Only a small number of the possible deliverables listed are likely to have resource allocated to them. Investment decisions will be made on the basis of the priority of the issue and the availability of a high-quality project to address that issue.

The overall deliverables (key performance indicators or KPIs) from this plan are that by 2023 (compared to 2018) the Australian processing tomato industry will have:

- Increased yields;
- Exported a higher portion of production;
- Supplied a proportion of production into new value-added products;
- Achieved greater levels of automation involved in production;
- Increased satisfaction and confidence to invest among producers and processors; and
- Demonstrated a more collaborative approach between producer and processor.

These KPIs will be measured by the various activities in the monitoring and evaluation framework for this plan, especially

- Compilations of industry statistics;
- Producer and processor surveys; and
- R&D reports.

Outcome 1 – Build skills, capacity and knowledge in the industry so that the capability exists to implement RD&E and marketing outcomes and deliver the supply and quality improvements needed by the industry

STRATEGIES	Possible deliverables
1.1 Undertake industry development, communication and R&D adoption activities to support innovation, enhance the skills of existing participants and encourage new entrants	<ul style="list-style-type: none"> a. Research reports, newsletters, fact sheets and other written materials (H) b. Activities that demonstrate new varieties, technologies and practices (H) c. Activities that support learning from other industries and countries, such as study tours (M)
1.2 Compile and communicate relevant industry statistics	<ul style="list-style-type: none"> a. Production and consumption reports (M)

Outcome 2 – Provide support for new or enhanced market opportunities, both domestically and increasingly for export, in order to increase demand and support processing tomato prices

STRATEGIES	Possible deliverables
2.1 Provide support for the outcomes of new or	<ul style="list-style-type: none"> a. Intelligence on new or enhanced market

enhanced market opportunities	<p>opportunities – domestic and export (M)</p> <p>b. Technical reviews of nutritional attributes of Australian processed tomato products (M)</p>
2.2 Support new product development activities in conjunction with processors	<p>a. Market research findings (from retail or food service sectors) on potential for new or enhanced processed tomato products (M)</p> <p>b. Conduct of trials on new products (H)</p>

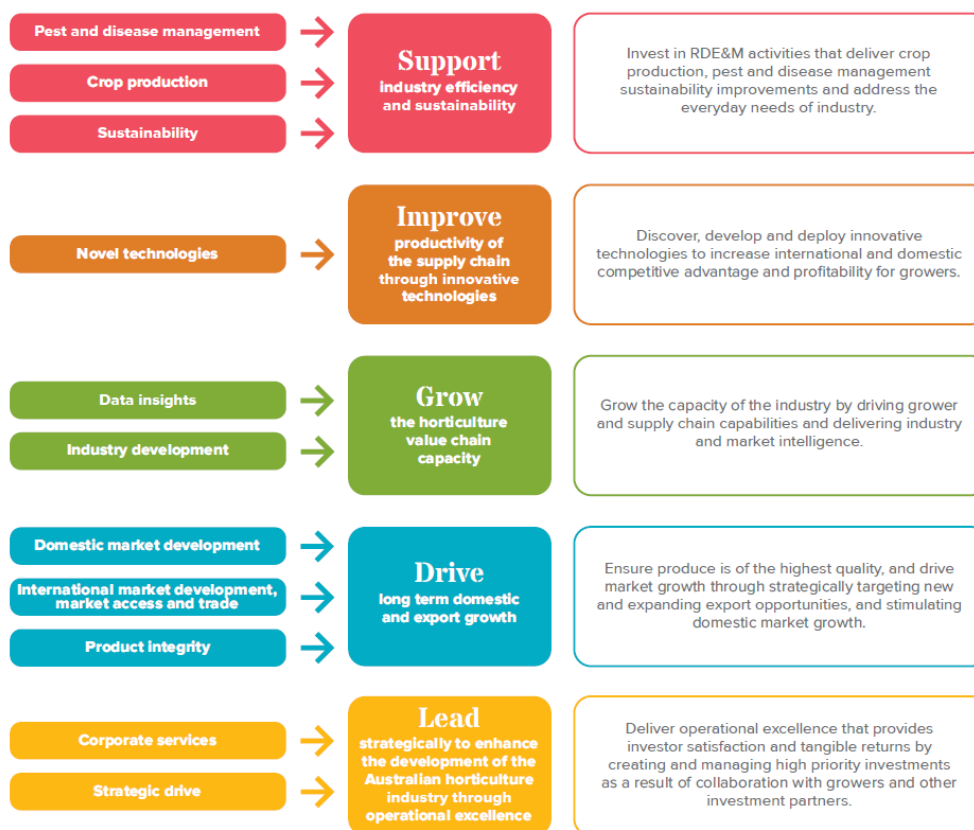
Outcome 3 - Undertake RD&E to improve product quality (including new varieties) and increase productivity / reduce yield variability in order to support the industry's future viability and sustainability

STRATEGIES	Possible deliverables
3.1 Undertake R&D to deliver, refine or validate superior on-farm technologies, varieties or practices to reduce cost of production, increase yield, make production easier and/or improve product quality	<p>a. Objective information on the performance of new plant varieties under Australian conditions and how to best to grow them (H)</p> <p>b. Proven strategies to minimise spatial and seasonal yield variability (H)</p> <p>c. Technologies or practices to reduce cost of production, make production easier and/or improve product quality (e.g. automation, better rotation crops) (H)</p> <p>d. Data and connectivity solutions for farms (M)</p>
3.2 Support the introduction of new processing technology, in conjunction with processors, to increase efficiency and/or product quality	<p>a. New processing technologies (M)</p>

Alignment with Hort Innovation investment priorities

In establishing investment priorities, Hort Innovation analysed both historical and current levy and co-investment portfolios and priorities. From this analysis we identified eleven cross-sectoral investment themes. We consolidated these themes further and considered their alignment with the government's Rural RD&E Priorities and National Science and Research Priorities, to arrive at five investment priorities outlined in the diagram below. The diagram also shows how each cross-sectoral investment theme relates to the five investment priorities.

Processing Tomato Strategic Investment Plan 2018–2023



The processing tomato SIP outcomes alignment to the Hort Innovation investment priorities and as a consequence the government’s Rural RD&E Priorities and National Science and Research Priorities is shown in the table below.

Hort Innovation Investment Priorities	Processing tomato SIP Outcomes
Support industry efficiency and sustainability	Outcome 1 – Build skills, capacity and knowledge in the industry so that the capability exists to implement RD&E and marketing outcomes and deliver the supply and quality improvements needed by the industry
	Outcome 2 – Provide support for new or enhanced market opportunities, both domestically and increasingly for export, in order to increase demand and support processing tomato prices
Improve productivity of the supply chain	Outcome 3 - Undertake RD&E to improve product quality (including new varieties) and increase productivity / reduce yield variability in order to support the industry’s future viability and sustainability
Grow the horticulture value chain capacity	Outcome 1 – Build skills, capacity and knowledge in the industry so that the capability exists to implement RD&E and marketing outcomes and deliver the supply and quality improvements needed by the industry
Drive long term domestic and export growth	Outcome 2 – Provide support for new or enhanced market opportunities, both domestically and increasingly for export, in order to increase demand and support processing tomato prices
	Outcome 3 - Undertake RD&E to improve product quality (including new varieties) and increase productivity / reduce yield variability in order to support the industry’s future viability and sustainability
Lead strategically to enhance the development of the Australian horticulture industry through operational excellence	Enabler

Section four: Processing tomato SIP monitoring and evaluation framework

A SIP program monitoring and evaluation (M&E) plan has been developed for the processed tomato SIP. The M&E plan shows the performance measures to demonstrate progress against the SIP and what data will be collected. Progress against the SIP will be reported in Hort Innovation publications and at industry SIAP meetings.

The SIP outcomes and strategies will be used to inform investments in individual projects to deliver the SIP. The results of M&E will be used to reflect on the results of investments and in decision-making. Hort Innovation will facilitate the regular review of SIPs to ensure they remain relevant to industry.

The processed tomato MER framework is shown in Table 3. The framework shows what will be measured to demonstrate progress against the plan and how these metrics will be tracked.

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Processing Tomato SIP MER Table

The processing tomato SIP MER updated below in accordance with the indicative logic model. The MER table includes KPIs and data collection methods both at a macro/industry (trend) level and at more specific SIP level/s.

Table 3: Monitoring and evaluation framework for this plan

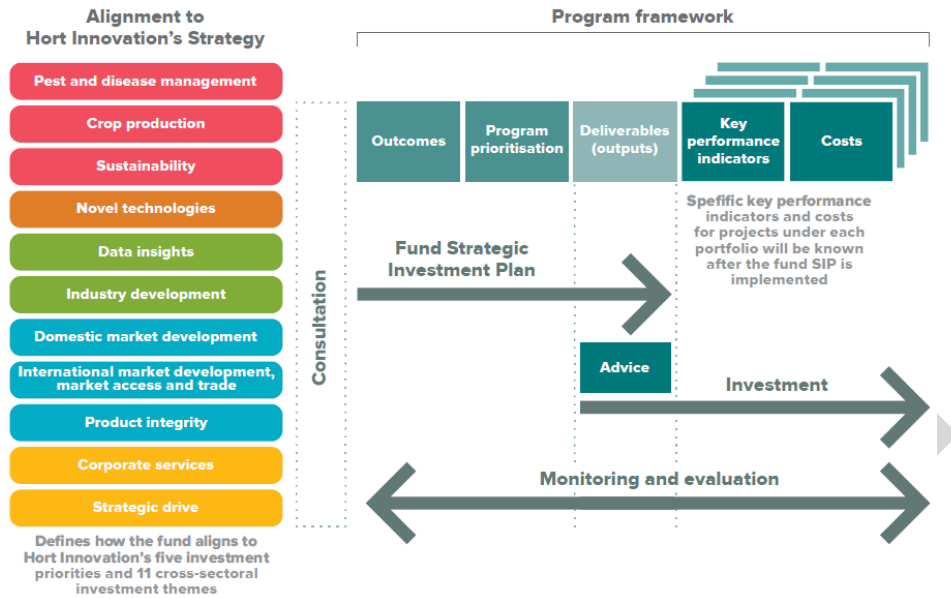
Outcomes	Strategies	KPIs	Data collection methods and sources
Outcome 1 – Build skills, capacity and knowledge in the industry so that the capability exists to implement RD&E and marketing outcomes and deliver the supply and quality improvements needed by the industry	1.1 Undertake industry development, communication and R&D adoption activities to support innovation, enhance the skills of existing participants and encourage new entrants	<ul style="list-style-type: none"> Evidence of reach and uptake of information presented at extension program events, especially in relation to new varieties, technologies and practices (number of events, participants and satisfaction) Evidence of communication products developed Grower satisfaction with and utilisation of communication products Confidence of growers in the positioning of the Australian processed tomato industry in relation to this SIP and access to production, supply and quality improvement R&D and marketing information Evidence of implementation of activities that support learning from other industries and countries, such as study tours 	<ul style="list-style-type: none"> Event participant surveys Communication products in place Grower surveys Grower surveys Record of other events and outcomes
	1.2 Compile and communicate relevant industry statistics	<ul style="list-style-type: none"> Evidence of industry reports and distribution of these Availability of industry data for monitoring industry performance 	<ul style="list-style-type: none"> Record of studies Grower & processor surveys
Outcome 2 – Provide support for new or enhanced market opportunities, both	2.1 Provide support for the outcomes of new or enhanced market opportunities	<ul style="list-style-type: none"> Evidence of intelligence on new or enhanced market development opportunities Information on the nutritional attributes of Australian processed tomato products available 	<ul style="list-style-type: none"> Reports on opportunities Research reports

Processing Tomato Strategic Investment Plan 2018–2023

Outcomes	Strategies	KPIs	Data collection methods and sources
domestically and increasingly for export, in order to increase demand and support processing tomato prices	2.2 Support new product development activities in conjunction with processors (e.g. assisting with trials)	<ul style="list-style-type: none"> Market research findings on potential for new or enhanced processed tomato products Number of collaborative RD&E projects New products trialled, developed and commercialised 	<ul style="list-style-type: none"> Market research reports Research reports Reports on new products Grower & processor surveys
Outcome 3 – Undertake RD&E to improve product quality (including new varieties) and increase productivity / reduce yield variability in order to support the industry’s future viability and sustainability	3.1 Undertake R&D to deliver, refine or validate superior on-farm technologies, varieties or practices to reduce cost of production, make production easier and/or improve product quality	<ul style="list-style-type: none"> Evidence of objective information on the performance of new plant varieties under Australian conditions Evidence of strategies to minimise spatial and seasonal yield variability Evidence of new technologies being researched and/or developed to make production easier, less costly or resulting in improved product quality 	<ul style="list-style-type: none"> Research and extension reports Research and extension reports Research and extension reports Grower surveys on cost and ease of production Processor surveys on product quality Grower surveys
	3.2 Support the introduction of new processing technology, in conjunction with processors, to increase efficiency and/or product quality	<ul style="list-style-type: none"> Evidence of improved data connectivity for farms Evidence of new technologies being researched and/or developed Evidence of increased production efficiency and/or improved product quality 	<ul style="list-style-type: none"> Research reports Processor surveys on production efficiency and product quality

Reporting

The Program Framework in the figure below is the mechanism that links Hort Innovation’s strategy and investment priorities to the investment process through the industry SIP. SIPs assist Hort Innovation to prioritise and implement the specific industry R&D and Marketing programs.



Hort Innovation will use dynamic reporting against our monitoring and evaluation framework to report on investment progress. The intention of investments of each industry SIP contributing to each industry outcome will be reported regularly including through annual reports and Hort Innovation’s Annual Operating Plan.

Section five: Impact assessment

Impact assessment

To be included by Hort Innovation

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Section six: Risk management

This section highlights any unique or specific risks that may impact on the implementation and outcomes of the Strategic Investment Plan. It does not cover industry risks which in part are considered in the SWOT. Where such risks are identified, mitigation strategies are listed for consideration.

Risk	Mitigation strategy
1. The key IDM role may not be adequately filled in the future	<ul style="list-style-type: none"> • Maintain existing personnel • Consider succession planning
2. Available funds may limit ability to achieve desired outcomes	<ul style="list-style-type: none"> • Only undertake activities with greatest potential • Do not over-promise SIP likely impact
3. Many of the outcomes desired by industry are focussed on marketing but consumer marketing (both domestically and internationally) is expensive	<ul style="list-style-type: none"> • Identify any RD or E activities that will help underpin industry marketing activities • Focus on trade marketing rather than consumer marketing
4. Solutions may not be found to some key issues (e.g. harvesting logistics, climate variability, yield variability)	<ul style="list-style-type: none"> • Identify risk / reward scenarios • Focus on fewer, larger projects

Appendix 1: Process to develop this plan

The process for the development of this SIP was as follows:

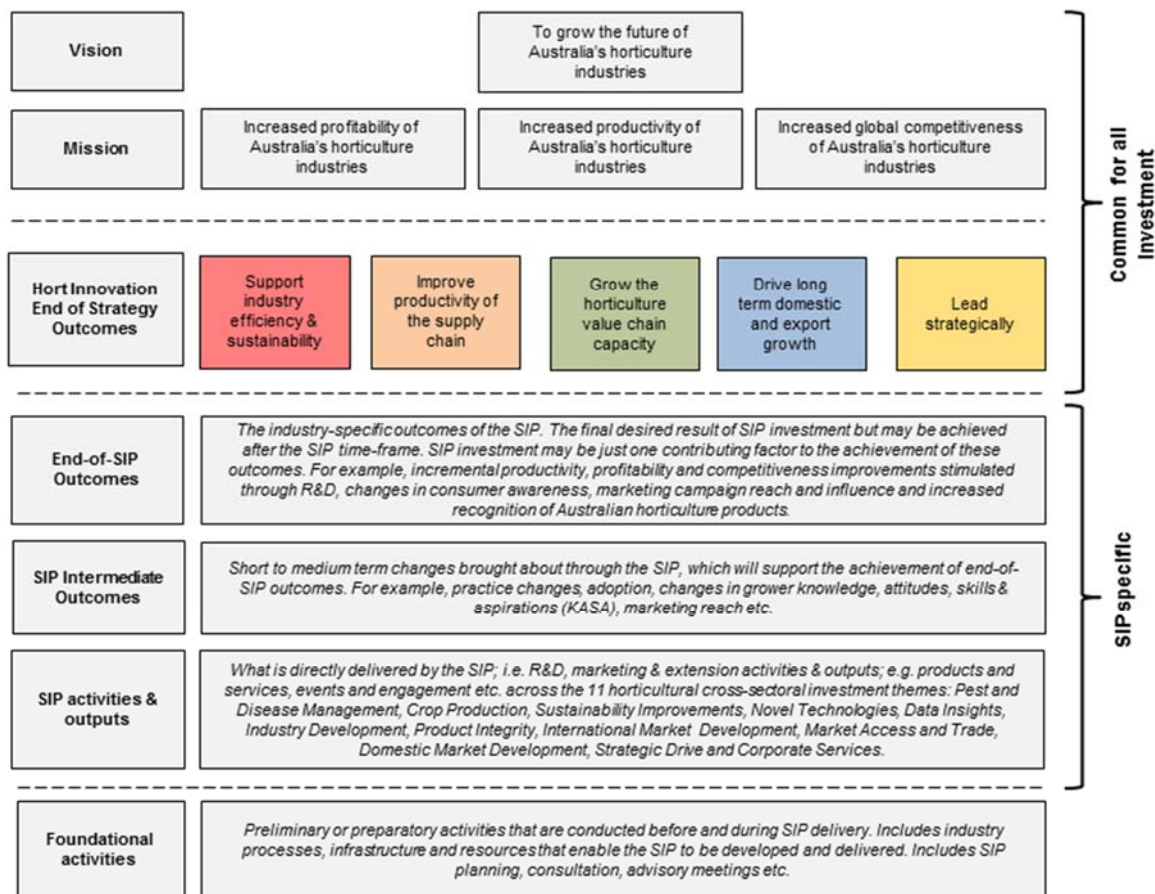
- The consultants were provided with a range of background documents including the previous SIP and annual industry surveys
- The consultants attended the Tomato 2017 Forum held in Echuca in June 2017. At the Forum they facilitated a strategic planning session with attendees
- A series of consultations was then undertaken – either one-on-one or in groups. These included:
 - Growers in the Echuca and Boort regions
 - Representatives of Kagome and SPC
- A draft SIP was prepared and circulated to the SIAP, then presented to the SIAP at its meeting in Echuca in October 2017
- The draft SIP was revised based on the feedback received
- Further feedback was gained from the SIAP in a teleconference in February 2018
- The final draft SIP was produced for all-of-industry comment.

Appendix 2: People consulted

The following individuals were consulted during the development of this SIP (and their assistance is gratefully acknowledged).

<p>SIAP Members</p> <ul style="list-style-type: none"> • Cath Botta (Independent Chair) • Matthew Wright • Charles Hart • James Weeks • Jim Geltsch • Liz Mann • Nick Raleigh • Tony Henry • Sze Flett
<p>Hort Innovation</p> <ul style="list-style-type: none"> • Sam Turner
<p>Others</p> <ul style="list-style-type: none"> • Participants at Tomato 2017, Echuca • Brendan Kilter • Bruce & Dwight Weeks • Nick Raleigh (Kagome) • Matt Wright (Kagome) • Simon Mills (SPC) • Boort producers <ul style="list-style-type: none"> ○ Ryan Lancaster ○ Lyndon Wakeman ○ Stuart Rendell ○ Graham Lawrence ○ Michelle Harman ○ Tony Henry ○ Hamish Lanyon

Appendix 3: Logic Hierarchy



Appendix 4: Reference documents

- APTRC (2013), TM12009 Processing Tomato Strategic Investment Plan
- APTRC (2016), Annual Industry Survey
- APTRC (2016), R&D Planning for Production Efficiency Improvements in the Australian Processing Tomato Industry
- APTRC (2017), Annual Industry Survey
- APTRC (2017), Papers for Processing Tomato R&D Conference
- APTRC, Cultivar Selection Criteria for the Australian Processing Tomato Industry
- Tomato News (2014), Global consumption survey 2012/2013
- WPTC (2017), World production estimate of tomatoes for processing Export Plan 2014-2019

Acronyms

APTRC	Australian Processing Tomato Research Council Inc
HAL	Horticulture Australia Limited
HIA	Horticulture Innovation Australia (Hort Innovation)

IDM	Industry Development Manager
KASA	Knowledge, attitudes, skills and aspirations
MER	Monitoring, evaluation and reporting
R&D	Research & development
RD&E	Research, development & extension
SIAP	Strategic Industry Advisory Panel
SIP	Strategic Investment Plan
TPP	Tomato potato psyllid

Plan on a page

TO BE COMPLETED – AFTER VALIDATION IS COMPLETED A SUMMARY OF THE PLAN WILL BE CREATED