# Persimmon

## STRATEGIC INVESTMENT PLAN

2017-2021

Hort Innovation
Strategic levy investment

PERSIMMON FUND

# Content






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# Introduction

**This Strategic Investment Plan (SIP) is the roadmap that helps guide Hort Innovation's oversight and management of individual levy industry investment programs. The SIP lays the foundation for decision making in levy investments and represents the balanced interest of the particular industry from where the levy is collected. The very important function of the SIP is to make sure that levy investment decisions align with industry priorities.**

## The persimmon industry SIP

*Appendix 1*www.horticulture.com.au

# Persimmon

## STRATEGIC INVESTMENT PLAN 2017-2021 AT A GLANCE

### POTENTIAL IMPACT OF THIS PLAN

**$3.99 Million**

Based on an estimated investment of $0.88 million over the next five years

| OUTCOMES | STRATEGIES |
|---|---|
| Increased demand with domestic and export opportunities increases returns to growers | Improve industry understanding of persimmon consumer preferences and their buying habits |
| | Drive domestic growth through targeted marketing initiatives |
| | Research and develop export opportunities |
| | Research profitable value-add/ processing |
| Increased industry production and improved productivity to meet increasing domestic and international demand | Continue to improve plant health and the development of new rootstocks |
| | Invest in improved pest and disease management |
| | Encourage regional diversification to extend domestic availability of persimmon |
| | Continue to improve grower and industry engagement to facilitate the adoption of research and best practices |

### Major opportunities

- Increased immigration from Asia to Australia provides growth opportunities domestically, given the popularity of the fruit among Asian cultures
- Potential increase in domestic demand due to consumer trends towards healthier food options
- Growing unfulfilled demand in export market
- Potential to better manage supply into market
- Development of vegetative propagation for root stocks
- Utilise postharvest cold storage to extend fruit life
- Take a long-term approach to export development and put in place the foundations to be successful
- Transition persimmons into a mainstream product.

# Persimmon

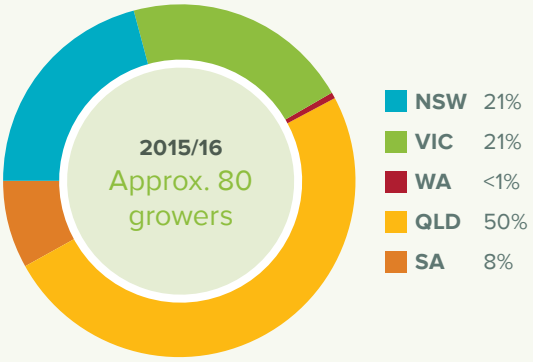
## STRATEGIC INVESTMENT PLAN 2017-2021

## AT A GLANCE

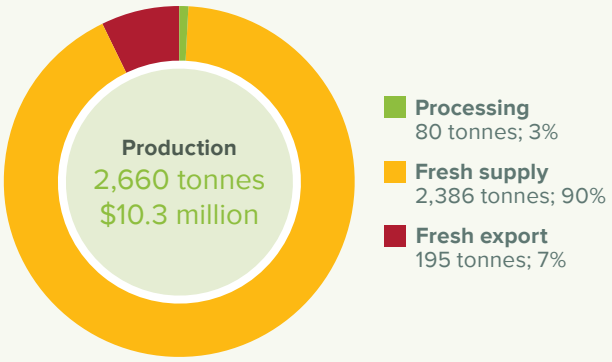
### Major challenges

- Production costs such as chemicals, water, energy and labour are growing at a faster pace than crop returns
- Lack of year-round availability
- Lack of shelf space on retailer displays
- Current changes in export protocols for international markets could impact Australia's ability to export
- Low consumer awareness of persimmons domestically
- Limited availability of resources and R&D and marketing investment funds relative to the investment needs
- Prices are sensitive to fluctuations in supply
- Increasing setup, production and supply chain costs
- Lack of appropriate supply chain and production data to help overcome supply peaks and troughs
- Ageing growers, combined with difficulties in identifying new/younger growers
- Lack of rootstock means that crops are inconsistent from tree to tree
- Moving from exotic fruit to mainstream.

### Industry size and production distribution




### Persimmon supply chain and value 2016



SECTION ONE

# Context

## The Australian persimmon industry

Persimmon production in Australia is seasonally-based with production in Queensland commencing in late January or early February and continuing through to June when produce is provided by growers in southern states. Extending the existing domestic growing season by increasing production in those regions with a longer fruiting season is important to building the customer demand for the product.

Persimmons originate from Asia where they are grown on trees with a long life span and which are cultivated from seed. There are two varieties, astringent and non-astringent. Astringent varieties produce a fruit that is initially dry in taste until it ripens. The non-astringent varieties are sweet and easily eaten when picked. The majority of the commercial persimmon crops in Australia are non-astringent varieties, mostly originating from Japan.

As persimmon plants are currently cultivated from seeds, the trees vary considerably. This creates disparity in production as well as inefficiency in harvesting due to considerable variation in tree heights, tree maturity and markedly different fruit quantities. Addressing these challenges through the development of a vegetative or clonal propagation technique using root stock would enable consistency across crops and provide the biggest remedy to improve new plantings.

Pest and disease issues such as clearwing moth vary across growing areas and need to be addressed on a regional basis. There is also opportunity to utilise postharvest treatment such as cold storage to extend fruit life by up to 10 weeks.

While research shows that only 22 per cent of the Australian population identify as regular purchasers of persimmon, when available, the fruit finds a ready market with those people and cultures that have an historical association with it. The seasonality of the crop means the fruit is subject to substitution from other fruits and imported product easily fills the gap when local product is unavailable. There is a market for exported product but Australia is a small proportion of this trade with 162 tonnes exported in 2015. Spain has been the most active producer internationally, with increased production and exports to take advantage of this opportunity. For Australian growers to successfully expand exports it will require a long-term multi-stage strategy which combines exporting to existing markets as well as developing access to new markets.

Persimmon production in Australia has a viable future. There are opportunities to increase sales in the domestic market and in the longer term to build a viable export market. Having a root stock that will enable plantings to be consistent and finding ways to increase the period where local product can be supplied to consumers will enable the industry to expand more efficiently and build demand.

### Products marketed

Around 90 per cent of the persimmon production in Australia corresponds to sweet (non-astringent) persimmon. The majority of domestic production corresponds to non-astringent sweet Japanese varieties including Fuyu, Jiro, Izu and Suruga[1] but some individual growers are planting newer varieties which they believe provide higher yielding opportunities.

In order to increase on-farm productivity, recent research initiatives have focused on the development of new varieties. These projects have assessed the viability of introducing the Rojo Brillante variety (Spanish cultivar), as well as other high quality varieties from Korea and China. Assessments include fruit quality, disease resistance and yield capabilities. The introduction of new cultivars aims to improve productivity and increase consumer satisfaction.

There has been a significant proliferation of new plantings, particularly in the southern growing regions. The increased use of trellised methods including the palmette system has led to higher planting densities, improved picking and pruning and has increased the efficiency of orchards.

While persimmons are generally less prone to pests and diseases compared with other fruits, there are serious issues from the ones that do. These pests and diseases, including those that do affect them, can cause serious issues. Management strategies of Fruit Fly (the main insect pest of persimmon) and Clearwing Moth and the main diseases (leaf spot diseases, anthracnose and twig blight) have been recently developed and included in the industry's IPDM manual prepared by Queensland's Department of Agriculture and Fisheries (QDAF)[2].

Depending on the scale of operation, most growers have their own on-farm grading equipment, packing and cooling facilities, enabling them to do their own packing once the fruit is handpicked. The fruit is then supplied to both the central market system and supermarkets. The three basic segments supplied are supermarkets, independent retailers and farmer's markets.

## Consumers and consumer research

Women between the ages of 18 to 34 years of age are the main buyers of persimmon[2]. The next key consumer segment is women aged between 35 to 49 years of age[4].

The latest consumer research conducted by Sprout Research in 2013 indicates that 73 per cent of respondents reported that they have never purchased the fruit. Almost half of non-consumers reported that the main reason for not buying the fruit was the lack of knowledge about persimmons, while a third indicated not knowing how to consume them.

In terms of drivers of consumption, almost a quarter of consumers highlighted the following factors as the key motivators when buying the fruit: quality, price, availability (being in season) and health benefits.

Key additional findings from 2013 consumer research were:

- 73 per cent of respondents did not consume persimmons during 2013, while 22 percent did buy the fruit (five per cent were not sure of whether they bought it or not)
- Of those consumers who brought the fruit, 53 per cent were female, 37 per cent were between 18 and 34 years old, and 31 per cent lived in either New South Wales or Canberra
- Of those who did not buy persimmons, 51 per cent where male, 31 per cent were between 35 and 49 years old, and 29 per cent lived in either New South Wales or Canberra
- 63 per cent of persimmon buyers make the purchase decision in-store. This highlights the importance of point of sale (POS) promotion, however, only three per cent of them recalled noticing the POS material displayed
- 37 per cent of persimmon buyers purchased the fruit in supermarkets, while 33 per cent bought them in greengrocers.

In 2014/15, nine per cent of Australian households purchased fresh persimmons, buying an average of 520 grams per shopping trip. The consumption per capita was 116 grams, based on the volume supplied[3].

While this research only identifies age and state demographics, there is anecdotal evidence that there are likely three market segments in the domestic market that should be approached:

- People of Asian and Mediterranean background who have high acceptance of persimmon who are likely to represent a segment with considerable unmet and increasing demand
- Older people who have grown up in Australia and who may have eaten astringent persimmon and because of the taste have discounted buying the product
- Younger Australians who have little knowledge of the product, given that they have never been exposed to it at home and therefore don't look to purchase the fruit.

Understanding these perceptions and sales channels will assist in tailoring any marketing efforts in those areas where there is potentially the greatest growth.

## Production

The *Australian Horticulture Statistics Handbook 2014/15* states that the production volume of persimmon was 2,482 tonnes for the year ending June 2015[3]. ***Table 1*** shows the production figures for the period ending in June 2013, June 2014 and June 2015.

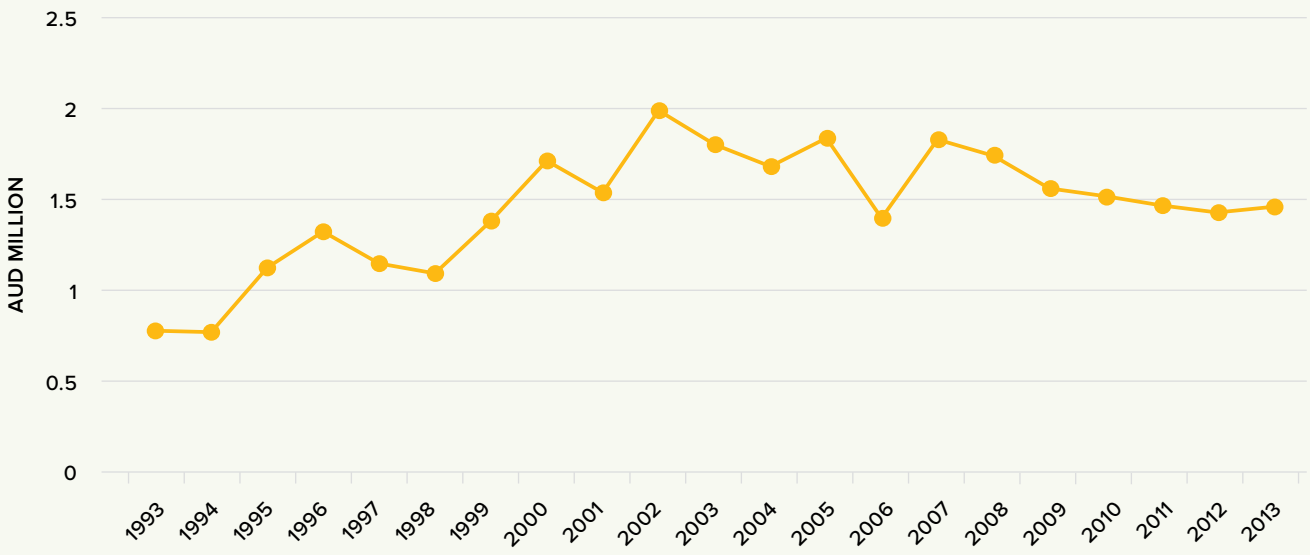
The data published in the *Horticulture Statistics Handbook 2014/15* adopts a modelling approach that centres on determining the fresh market value and volume and is based on a number of collated collection points over time. Data may updated into this model as it comes available.

**Table 1: Production figures** *(Source: Horticulture Innovation Australia, Australian Horticulture Statistics Handbook 2014/2015[3])*

| | 2012/13 | 2013/14 | 2014/15 |
|---|---|---|---|
| Production volume (tonnes) | 2,254 | 2,145 | 2,482 |
| Production value (million) | $7.1 | $6.8 | $8.4 |
| Fresh imports volume (tonnes) | 694 | 608 | 617 |
| Fresh imports value (million) | $2.7 | $2.9 | $2.7 |
| Fresh exports volume (tonnes) | 211 | 205 | 162 |
| Fresh exports value (million) | $0.8 | $0.9 | $0.7 |
| Fresh supply volume (tonnes) | 2,529 | 2,373 | 2,755 |
| Fresh supply value (million) | $10.4 | $9.4 | $11.7 |

**Figure 1: Gross production value of Australian persimmons, 1993 to 2013**

*(Source: FAOSTAT, Value of agricultural production – persimmons (2015)[6])*




Production in the regions around the Goulburn Valley in Victoria and Riverland in South Australia is extending the growing season.

Growers see the benefits in being able to extend the supply period to the market and reduce seasonal restrictions of that supply. Several options are available to achieve this outcome including building supply in new regions to lengthen existing supply periods and using post-production techniques that extend the life of the product. Effective cold storage techniques can increase storage life from the existing two weeks to eight to ten weeks.

Existing breeding can produce significant variability in growth and tree production meaning that individual tree product ripening, tree yield and harvesting costs are impacted. The development of a viable clonal or vegetative propagation rootstock technique and varieties will have a significant positive impact on the industry.

## Domestic markets

Persimmon fruit is supplied to the central market system and supermarkets. The three basic segments supplied are supermarkets, independent retailers and roadside/ farmers' markets.

Recent plantings corresponding to the Jiro variety in southern states are expected to significantly increase volumes as the trees come into bearing age. This may impact prices.

New Zealand is the main exporter of persimmons into the Australian market with 606 tonnes, recording a reduction of 85 tonnes from 2013.

***Figure 1*** illustrates the gross value of persimmon production in Australia in the 20-year period from 1993 to 2013, obtained from FAOSTAT[6]. While the value of production trended upwards from 1993 to 2002 when the value of production peaked at $2 million, since then, the trend has been downward.

## Export markets

The *Australian Horticulture Statistics Handbook 2014/15* states that exports for the year ending in June 2015 were 162 tonnes, with a value of $0.7 million. This represents 6.5 per cent of the total production for the 2014/15 period[3].

In relation to the last four years, exports of Australian persimmons have decreased steadily. Export volumes have gone from 261 tonnes in 2011/12, to 162 tonnes in 2014/15, decreasing at an average of 14 per cent every year. Additionally, export values have recorded a $200,000 decrease from 2014 to 2015[3].

During the four-year period between 2011/12 and 2014/15, import volumes have equalled and surpassed export volumes: exports were greater than imports by 94 tonnes in 2011/12, while in 2014/15 exports were less than exports by 455 tonnes[3].

The top three export markets for Australian persimmons during the 2014/15 period were Malaysia (53 per cent of exports), Singapore (27 per cent) and Hong Kong (16 per cent)[3]. Exports volumes shipped to these countries have decreased in the last three years, with the exception of Hong Kong, where exports went from 16 tonnes in 2013 to 25 tonnes in 2015[3]. There was also a modest increase in persimmon exports to Saudi Arabia and New Caledonia and, although these countries are small markets for Australia, they show potential for development, thus providing avenues for future increases in total exports.

Potential expansion into critical East Asian markets including South Korea, Taiwan, Japan and China are constrained by current quarantine restrictions on the Australian fruit. Moreover, changes in international market access protocols affect export viability in South-East Asian countries, for example, Thailand.

Long-term development of export markets requires a clear multi-stage strategy. Industry access to markets can take up to eight years to achieve the required level of unrestricted trade but this will always be dependent on the ability of the country supplying to maintain acceptable fruit quality and acceptable protocols. Building grower and industry capability and consistency in existing export markets provides an important learning and testing ground in harvest, postharvest, logistics and marketing that is vital in building long-term export markets.

## International persimmon producers

China remains the biggest producer of persimmons with 43 per cent (1.99 million tonnes) of the global production of 4.64 million tonnes in 2013. The production in China has followed a year-on-year increasing trend over the last 12 years from 2011 to 2013[8]. Other key producers are the Republic of Korea and Japan with six per cent each, Brazil with three per cent and Azerbaijan with two per cent. Australia contributes with less than 0.1 per cent of the worldwide production[9].

Chinese persimmons compete with South Korean, Australian and Spanish persimmon in big markets such as Hong Kong. An advantage for the Australian industry is that production is counter-seasonal to the production season in China, so it does not compete directly with Chinese persimmons[10].

The majority of the non-astringent persimmon plantings in all these countries are Fuyu, the world's benchmark variety[11]. In other countries including the United States, the Jiro variety is as common as the Fuyu[12].

One country that has recently expanded its harvest and export of persimmon is Spain. Spain has built a multi-layered co-operative structure which spans from a local to a national level. This structure has provided support for growers to enter the industry and develop a consistent fruit and approach to postharvest methods. This has seen a significant boost to production and provided a consistent product that can be marketed internationally with confidence in meeting individual country protocols. While Spain's approach may not be totally applicable to the Australian persimmon industry, there are learnings that should be examined and understood when developing a long-term export strategy for the Australian industry.

## Consumer benefits

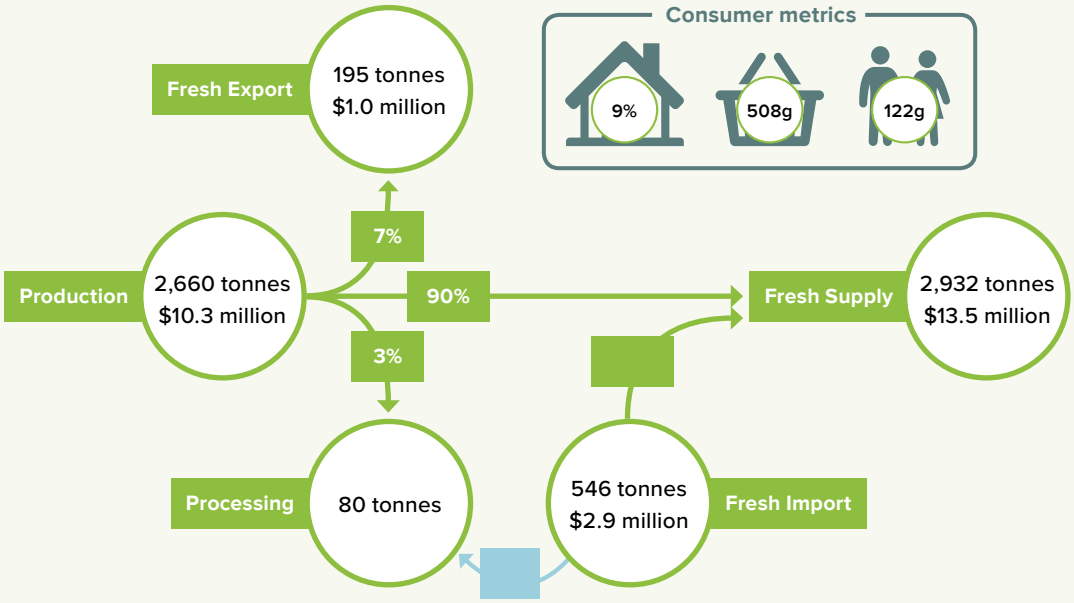
Persimmons are available from late February to June, peaking from March to May. The key benefits to the consumer are[7]:

- Good source of vitamin C and beta carotene
- High in fibre and fat free
- Contains twice the dietary fibre of other fruits, for example, apple
- High levels of minerals and antioxidants compared to other fruits
- Positive product attributes such as sweet, exotic, attractive, and easy to eat.

## Barriers to consumption

The existence of an astringent variety requires additional steps to carefully educate consumers as to when to consume the persimmon. This confusion about which variety to consume and ways of consumption represent considerable barriers to consumption. Additionally, given the small scale of production compared to other fruits, persimmons are often not available in chain stores and fruit and vegetable shops.

**Figure 1: Fresh persimmon supply chain year ending June 2016** *(Source: Australian Horticulture Statistics Handbook)*




*The figure above indicates overall figures of production, processing, exports, imports and fresh supply.*

## Competitors and the nature of competition

### Alternative products

Competing products include exotic fruits with high availability between March and May such as kiwifruit, nashi, papaya and passionfruit. It also includes products that can be sliced and used in salads to add flavour and colour such as mango, fig, pomegranate and cranberry.

### Ease of entry

Many orchards established by new growers in mid-1990s were abandoned and/or removed a few years later as a result of a lack of understanding of the growing and management techniques required to produce quality fruit. Therefore, knowledge on the high levels of management for persimmon crops represents a barrier for new producers, as well as having cost repercussions[13].

Additionally, given that it takes about three to five years before a persimmon tree is mature enough to bear fruit, it takes considerable time before a new producer is up to speed and able to become competitive within the industry[10].

## Operating systems

### Industry's supply chain

It remains difficult to obtain detailed supply chain figures on a monthly, weekly or daily basis. One of the key issues that growers face is the lack of reliable information on current market, demand and supply data. Data scarcity limits growers' understanding of retailers' activities and attitudes towards the product, knowledge that is critical to improve supply chain and retail performance.

### Production systems and processes

Persimmon production is labour intensive. The typical process involves the fruit being clipped from the tree, placed in bins and transported into the packhouse where it is polished and packed by hand[14]. The delicate nature of the fruit makes automation difficult, thus production units are small and intensive.

The number of freestanding persimmon plantings has decreased steadily since the 1960s. Currently, trellised palmette is the most common training system employed by growers, whereas less than 40 per cent of plantings are freestanding. This trend has positively impacted the fruit's storage life, as average shelf life from palmette systems is approximately three days greater than fruit from freestanding trees. It has also increased fruit size by two grades[15].

In terms of orchard protection, the utilisation of nets by the majority of persimmon growers across Queensland and New South Wales has ensured the protection of crops against predators (mostly birds), as well as reducing the negative effects of natural events such as hail[13].

While extensively used in other crops, growers have yet to fully explore the opportunities provided by postharvest cold storage in the persimmon industry and this process could extend fruit life for up to 10 weeks.

## Promotion and market development

Since the 2009/10 marketing campaign, promotional activities have included the development of persimmon recipes and product shots, distribution of media clips and the appointment of media ambassadors as the face of the industry. These initiatives have been maintained in successive campaigns. The persimmon website and logos were redesigned during the 2010/11 campaign, giving them a more sophisticated, cleaner and modern look. Additional point of sale (POS) material and recipes were developed in the 2011/12 campaign[16].

The 2013/14 marketing campaign was built upon the positive results and the momentum cemented in previous campaigns.

The industry secured the continuation of the partnerships with media personality and food celebrity Poh Ling Yeow as the brand ambassador of Australian persimmons. She featured in several educational videos and POS material, as well as the development of Poh's new persimmon recipes to build on prior recipes showcased in media as part of the 2012/13 marketing campaign[17].

The 2013/14 marketing campaign for persimmons was mainly focused on increasing consumer awareness, employing the website and social media as distribution platforms. The campaign reached an audience of over 18 million people, and achieved 104 media mentions (more than 50 per cent online) and 18 recipes published in lifestyle outlets[18]. There were also more than 2,100 Instagram post likes and more than 170 YouTube views[4].

A view has been expressed by some growers that marketing activities in the past have not been underpinned by a long-term strategic approach and therefore lacked consistency. While these activities may have grown some awareness of the fruit, greater understanding of market segregation and sales channels is required so that better targeting of marketing funds is undertaken. Given the seasonality of the fruit production in Australia, it is important that marketing activity is matched to Australian harvests so that the benefit improves the income of domestic growers.

## Operating environment

An analysis of the industry's strengths, weaknesses, opportunities and threats (SWOT) was undertaken by the persimmon industry and SIAP.

| The persimmon industry | |
|---|---|
| **Strengths** | • Positive association with product attributes such as exotic, healthy, attractive, easy to eat and sweet<br>• Highly competitive due to counter-seasonal supply capacity<br>• Location relative to Asian markets given the logistics advantage due to proximity<br>• Compact grow habit of plantings<br>• The geographical dispersion of production regions makes the industry less vulnerable to severe weather events, as well as enabling a distributed supply. |
| **Weaknesses** | • Limited access to effective disease and pest control techniques, and limited control techniques for these pests and diseases are registered for use on persimmons<br>• Low consumer awareness of persimmons domestically<br>• Difficulty in gaining access to close Asian markets<br>• Prices are sensitive to fluctuations in supply<br>• Increasing setup, production and supply chain costs<br>• Lack of appropriate supply chain and production data to help overcome supply peaks and troughs<br>• Ageing growers, combined with difficulties in identifying new/younger growers<br>• Lack of clonal rootstock system means that crops are inconsistent from tree to tree. |
| **Opportunities** | • Increased immigration from Asia to Australia provides growth opportunities domestically, given the popularity of the fruit among Asian cultures<br>• Value-add channel to be explored as currently an under-utilised avenue to market<br>• Potential increase in domestic demand due to consumer trends towards healthier food options<br>• Growing unfulfilled demand in export market<br>• Potential to better manage supply into market<br>• Development of vegetative propagation for rootstock<br>• Interaction and interchange with other producing countries<br>• Positive assessment of new cultivars may lead to a future introduction of varieties that meet consumer expectations<br>• Consumers are becoming more aware on the different uses and attributes<br>• Utilise postharvest cold storage to extend fruit life<br>• Take a long-term approach to export development and put in place the foundations to be successful<br>• Transition persimmons into a mainstream product. |
| **Threats** | • Production costs such as chemicals, water, energy and labour are growing at a faster pace than crop returns<br>• Lack of year-round availability<br>• Lack of shelf space on retailer displays<br>• New plantings in southern regions threatens to further increase price pressures given the imminent rise in fruit supply<br>• Current changes in export protocols for international markets could impact Australia's ability to export<br>• Moving from exotic fruit to mainstream. |

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SECTION TWO

# Persimmon industry outcomes

## Industry outcomes

The strategic intent of the persimmon industry is to provide consumers with a unique product, utilising innovative production systems thereby maximising grower profitability and sustainable industry expansion.

**OUTCOME 1**

**Increased demand, export opportunities and development of products increases returns to growers**

There is still some confusion amongst domestic consumers about when to buy and how to prepare persimmon. The development of marketing collateral that addresses this along with gaining detailed insight into consumer preferences and buying habits will significantly improve the industry's ability to market itself effectively. Therefore, using key performance indicators (KPIs) to measure the effectiveness of marketing initiatives will also be important to underpin investment. Consumer research will help to develop targeted marketing initiatives so that consumers are more aware of when and how to eat persimmon in order to increase demand.

Persimmons are also popular in Asian markets and opportunities exist for Australian growers to export a premium product. Market research to identify target markets and requirements to gain access will help the industry prioritise export development activities. By 2021, grower-led export initiatives should be in place to help ensure demand for Australian persimmon increases.

At this stage, the industry does not have high volumes of third grade fruit, however, this could change in the future or supply in some years may outstrip demand. Developing products and pathways that enable lower quality fruit or excess supply to be sold profitably will help to increase returns to growers. Explore opportunities to access different markets with different products such as dried and value-added products.

**OUTCOME 2**

**Increased industry production and improved productivity to meet increasing domestic and international demand**

Pest and disease management is an ongoing challenge for the industry and due to the industry's size, it can be difficult to obtain chemical use permits and registrations. Investment in existing and new chemicals are key to maintaining and improving grower productivity.

The short season makes it difficult for consumers to become aware of the product being in season and to make a planned purchase decision. Increasing the regional diversity will help to extend the season and enable Australian growers to benefit from the higher prices that are achieved outside of the current peak production periods. Currently, persimmon importers are benefiting from high shoulder season prices.

Rootstock variation is also seen as a factor limiting production and productivity and a research project to address this is a priority for the industry

The rapid dissemination and adoption of R&D is key to improving industry productivity. While 75 per cent of key stakeholders are satisfied with the performance of R&D activities, an ongoing commitment to industry engagement at the grower, supply chain and retailer level will help the industry continue to improve productivity and returns.

SECTION THREE

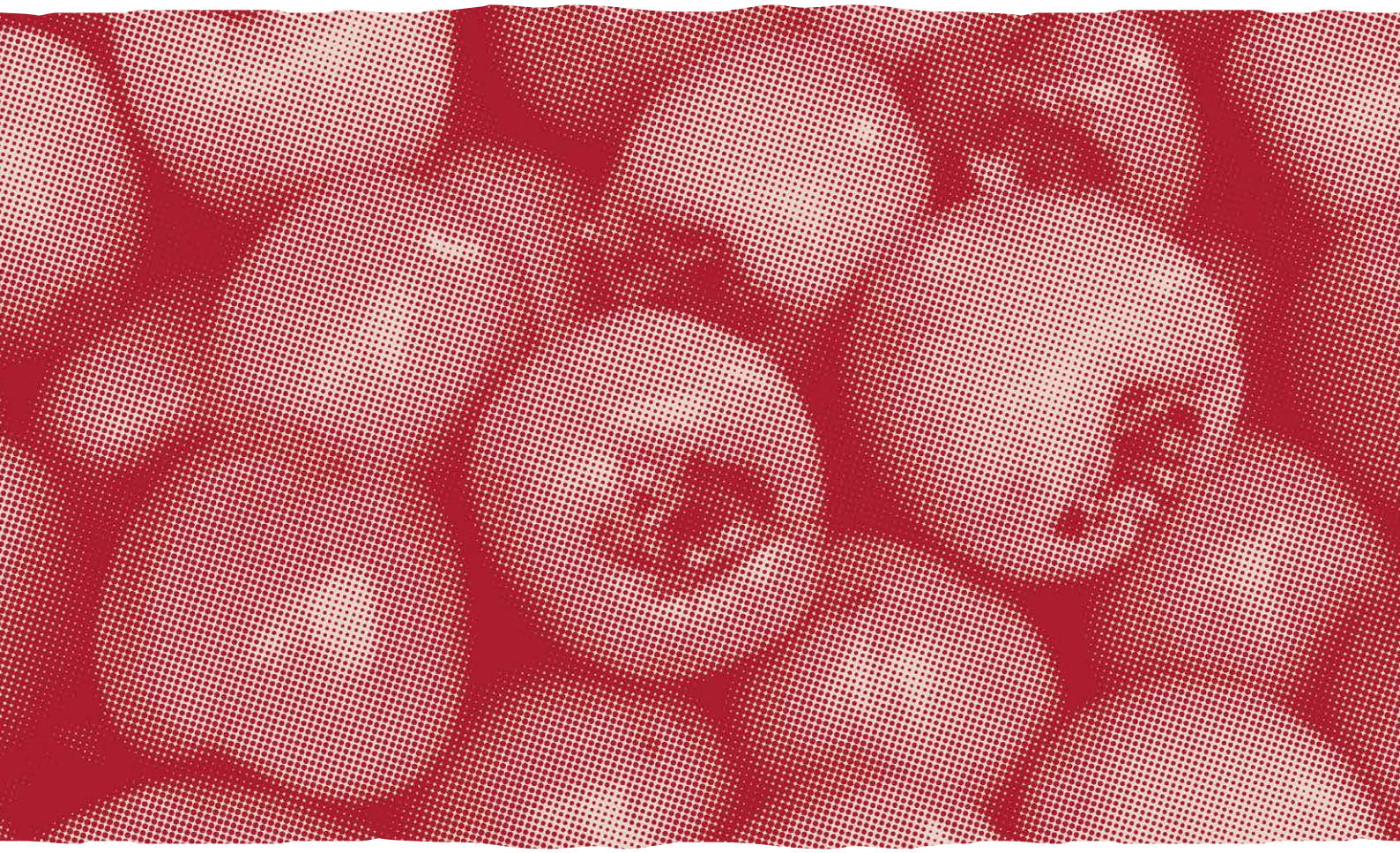
# 3 Persimmon industry priorities

## Industry investment priorities

The ability to deliver on all the articulated strategies (and investments) will be determined by the ability of the statutory levy to provide the resources to do so.

| OUTCOME 1 – Increased demand with domestic and export opportunities increases returns to growers | |
|---|---|
| **STRATEGIES** | **POSSIBLE DELIVERABLES** |
| 1.1 Improve industry understanding of persimmon consumer preferences and their buying habits | • Consumer research into buying habits, preferences regarding taste, texture and display is conducted |
| 1.2 Drive domestic growth through targeted marketing initiatives | • Long term strategic marketing plan developed<br>• Marketing collateral is refined to increase consumer awareness of when to buy and how to prepare persimmon<br>• Collaborate with other industries to develop joint marketing initiatives and promotional activities<br>• Consumer facing website is updated and maintained |
| 1.3 Continue to research and develop export opportunities | • Target export markets are identified<br>• Export development plans are prepared<br>• Pathways for growers to start exporting are developed<br>• Growers are encouraged to participate in export development initiatives |
| 1.4 Research profitable value-add/processing opportunities | • Value-add opportunities are researched with cost benefit analysis provided to help growers decide whether or not to pursue value-add activities |

| **OUTCOME 2 – Increased industry production and improved productivity to meet increasing domestic and international demand** | |
|---|---|
| **STRATEGIES** | **POSSIBLE DELIVERABLES** |
| 2.1 Continue to conduct research into improved plant health and the development of clonal rootstock | • Continued development of clonal rootstock |
| 2.2 Continue to invest in improved pest and disease management | • Permits and registrations for existing chemicals are maintained<br>• New chemicals are identified with use permits and registrations obtained for the persimmon industry<br>• Efficient methods for disease control are continued |
| 2.3 Encourage regional diversification to extend domestic availability of persimmon | • Engagement initiatives to attract new growers<br>• Increased uptake of R&D improves prioductivity for existing and new growers<br>• Shoulder periods of the season extended, for example, different varieties and storage and handling practices |
| 2.4 Continue to improve growers and industry engagement to facilitate the adoption of research and best practices | • Develop regular communications with growers, supply chain and retailer stakeholders to showcase opportunities, best practice and innovations<br>• Continue to develop leadership programs to drive new and innovative growers |



## Aligning to 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 11 cross-sectoral investment themes. We consolidated these themes further and considered their alignment with the Australian Government's Rural RD&E Priorities and National Science and Research Priorities, to arrive at five investment priorities outlined in ***Figure 2***. ***Figure 2*** also shows how each cross-sectoral investment theme relates to the five investment priorities.

**Figure 2: Hort Innovation's investment priorities**

The alignment of the persimmon SIP outcomes to the Hort Innovation investment priorities, and consequently, the Australian Government's Rural RD&E Priorities and National Science and Research Priorities are shown in ***Table 2***.

**Table 2: Alignment of persimmon SIP outcomes to the Hort Innovation investment priorities**

| Hort Innovation investment priorities | Persimmon industry SIP outcomes |
|---|---|
| **Support industry efficiency and sustainability** | **Outcome 1:** Increased demand with domestic and export opportunities increases returns to growers<br>**Outcome 2:** Increased industry production and productivity that meets increasing domestic and international demand |
| **Improve productivity of the supply chain** | **Outcome 2:** Increased industry production and productivity that meets increasing domestic and international demand |
| **Grow the horticulture value chain capacity** | **Outcome 2:** Increased industry production and productivity that meets increasing domestic and international demand |
| **Drive long-term domestic and export growth** | **Outcome 1:** Increased demand with domestic and export opportunities increases returns to growers |
| **Lead strategically to enhance the development of the Australian horticulture industry through operational excellence** | Enabler |

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SECTION FOUR

# Persimmon industry monitoring and evaluation

## Persimmon SIP monitoring, evaluation and reporting

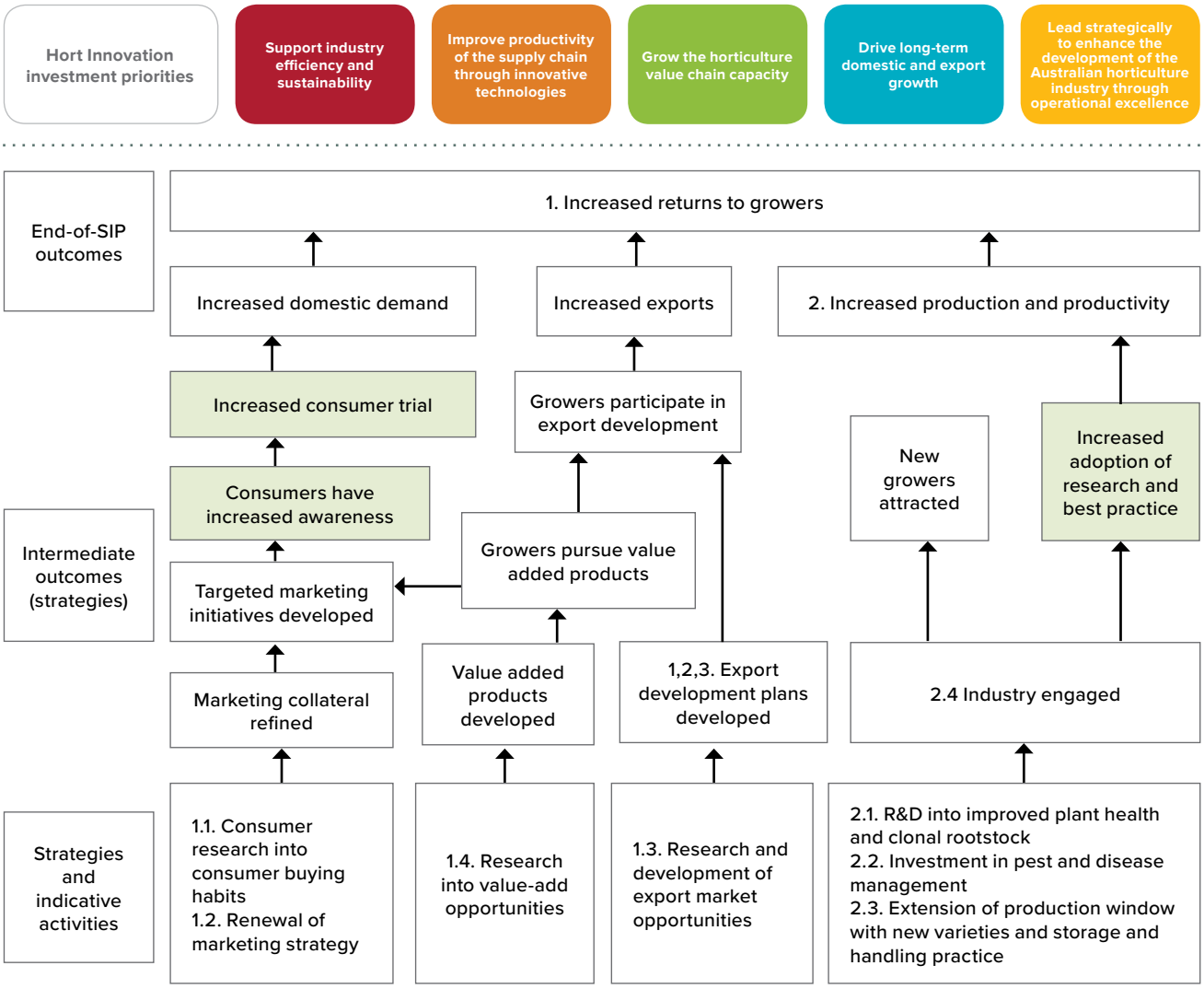
A SIP program logic and monitoring and evaluation (M&E) plan has been developed for the persimmon SIP. These are informed by the Hort Innovation Organisational Evaluation Framework. The logic maps a series of expected consequences of SIP investment. The M&E plan shows the performance measures that will be measured 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 on 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.

## Persimmon SIP logic

An indicative persimmon SIP program logic is shown in ***Figure 3***. The logic is based on the Hort Innovation SIP logic hierarchy (***Appendix 2***). The shaded boxes are not fully explicit in the SIP but necessary conditions for the achievement of expected outcomes.

**Figure 3: Persimmon SIP logic**



## Persimmon SIP M&E plan

The persimmon M&E plan is shown in ***Table 3***. The 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 plan for the persimmon SIP**

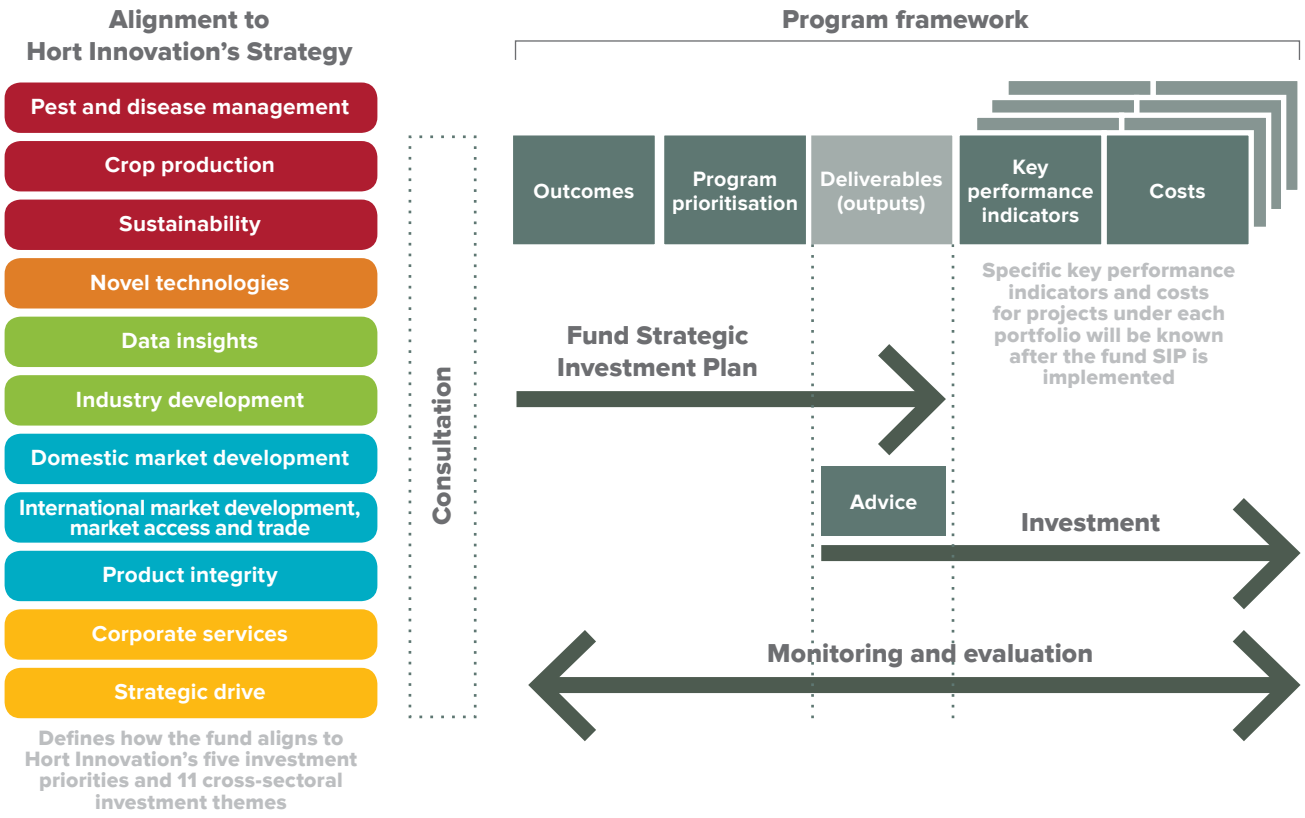
| Outcome | Strategies | KPIs | Data collection methods and sources |
|---|---|---|---|
| **OUTCOME 1:** Increased demand with domestic and export opportunities increases returns to growers | 1.1 Improve industry understanding of persimmon consumer preferences and their buying habits<br>1.2 Drive domestic growth through targeted marketing initiatives<br>1.3 Continue to research and develop export opportunities<br>1.4 Research profitable value-add/ processing opportunities | • Long term and annual marketing plans<br>• Evidence of domestic wholesale sales growth with a target of 10 per cent per annum from 2017 to 2021<br>• Evidence of increased industry understanding of export opportunities and growth in exports, with a target of 300 tonnes per annum by 2021<br>• Evidence of research on consumer preferences and improved industry knowledge of consumer insights<br>• Evidence of R&D on value-add products | • Wholesale markets data<br>• Retail and consumer data<br>• Trade data (Global Trade Atlas)<br>• R&D project records<br>• Grower/industry survey |
| **OUTCOME 2:** Increased industry production and improved productivity to meet increasing domestic and international demand | 2.1 Continue to invest in improved pest and disease management<br>2.2 Extend domestic availability of persimmon<br>2.3 Continue to conduct research into improved plant health and the development of new rootstocks<br>2.4 Continue to improve growers and industry engagement to facilitate the adoption of research and best practices | • Evidence of increased production with a target of 3,350 tonnes per annum<br>• Progress on rootstock trials<br>• Australian growers able to supply market from February through August<br>• Number of growers attending knowledge transfer events and using best practice information<br>• Transfer of international research and development opportunities to Australian growers where applicable | • R&D project records<br>• Wholesale markets data<br>• Production and trade data<br>• Grower/industry survey |

## Reporting

The program framework in ***Figure 4*** 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, extension and marketing programs.

Hort Innovation will use dynamic reporting against our monitoring and evaluation framework to report on investment progress. The contribution of investments to each industry outcome will be reported regularly, including through industry Annual Reports, Hort Innovation's Annual Report and Hort Innovation's Annual Operating Plan.

**Figure 4: Hort Innovation's program framework**

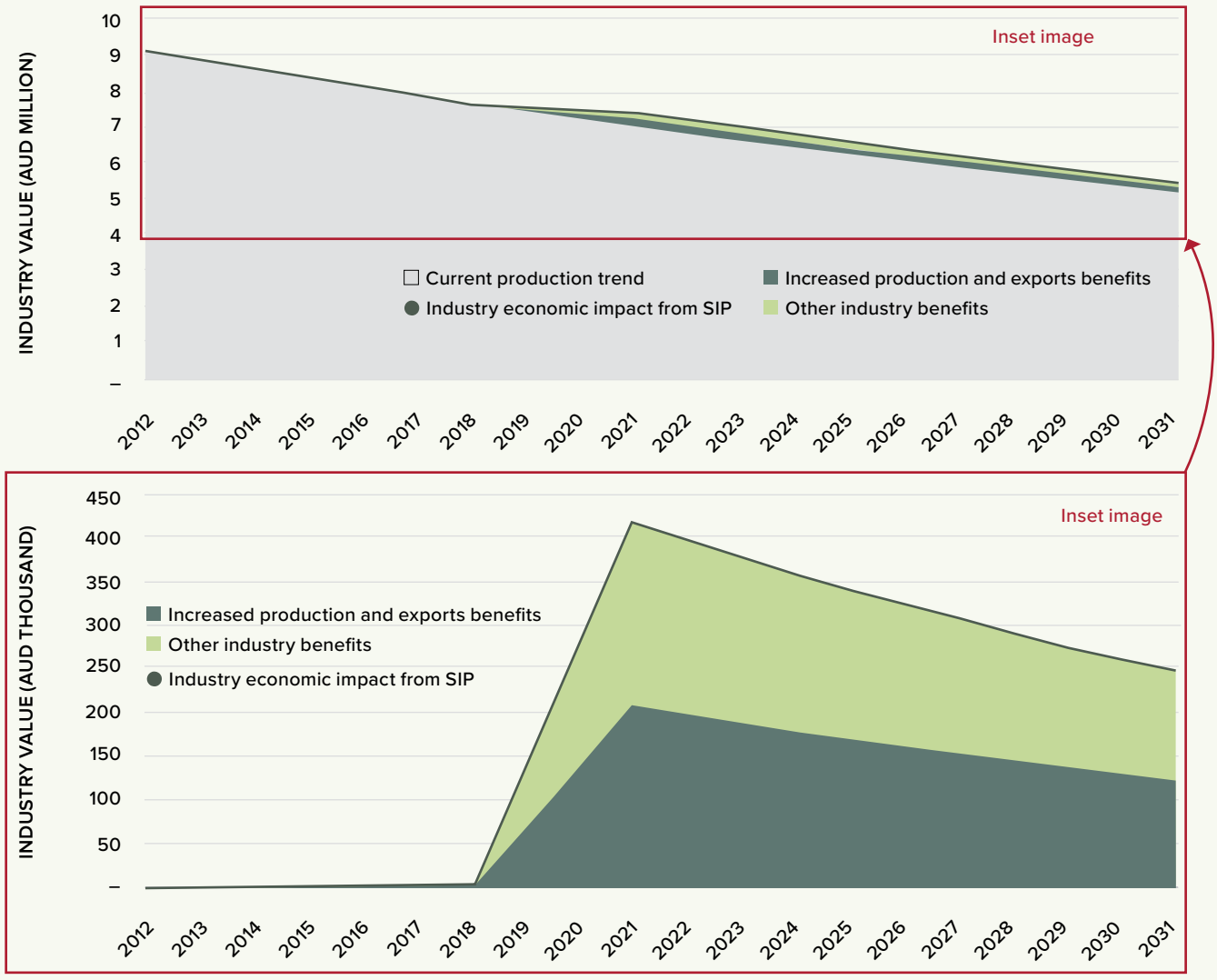


SECTION FIVE

# 5

# Impact assessment

Figure 5: Economic benefit from investment in the persimmon SIP




An independent assessment of the potential economic impacts from investment into the persimmon SIP indicated a positive return on investment for the industry (***Figure 5***). The anticipated investment of $0.88 million over the next five years in R&D, extension and marketing activities is expected to generate $3.99 million in net benefits for the industry, representing a benefit cost ratio of 4.54 times to growers and service providers along the value chain.

The assessment draws from a wide range of available data sources, and projects economic impacts over a 15-year period starting from 2016/17. A five per cent discount rate has been applied and all values are adjusted for inflation and presented in 2016/17 dollar terms. The assessment takes a highly conservative approach and the presented figures have been adjusted to account for risks associated with achieving research outputs, expected adoption and impacts.

*Table 4* provides a summary of the assessed impacts for each outcome identified in the SIP, the anticipated deliverables, net economic benefits and benefit cost ratio.

**Table 4: Overview of impacts assessed and alignment with SIP targets**

| Outcome | Expected deliverables | Anticipated SIP investment (over five years) | Net benefits (over 15 years) | Benefit cost ratio |
|---|---|---|---|---|
| (1) Increased demand with domestic and export opportunities increases returns to growers | • Increase domestic wholesale sales volume | $439,939 | $1,127,167 | 2.56 |
| | • Increase in exports sold, at projected prices | $439,939 | $2,866,374 | 6.52 |
| (2) Increased industry production and productivity that meets increasing domestic and international demand | • Necessary to drive quantified impacts | Incorporated in above | N/A | N/A |
| **All impacts** | | **$879,877** | **$3,993,542** | **4.54** |

The quantified impacts associated with the SIP Outcome 1 include:

- Production sold increasing to 25,000 tonnes by 2020/21, at current projected wholesale prices.

In order to deliver increased wholesale sales volume, research into consumer preferences will be needed alongside targeted marketing initiatives to drive consumer demand for persimmons.

- An increase in exports to 300 tonnes by 2020/21, at current projected pricing.

Sales to export markets will rely on continued research towards improving market access to both new and existing international markets.

Outcome 2 was not quantified, as it is a necessary precursor to delivery of Outcome 1 and the associated quantified impacts. Continued investment in pest and disease management, improved plant health and clonal rootstock will be required to maintain and improve yields and generate the necessary production to produce the quantified impacts. In addition, extension of the production season will be required to maintain more consistent supply to consumers.

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SECTION SIX

# Risk management

The purpose of this risk section is to highlight any unique or specific risks that qualify the SIP.  This is not intended to be an exhaustive risk review of the industry risks which in part are considered in the SWOT.

This is also not general investment risks which will be considered in the project investment process.

There is a risk of an inability to deliver this plan due to the size of the levy collection and some growers have expressed the view that the existing basis of levy collection will have an impact on the cash flow for levy expenditure during periods of lower production.

An additional risk to the success of this investment plan is the geographic diversity of production. This diversity means each region has their own risks regarding growing conditions, pests and disease that could limit the impact any investment into the industry when considered in conjunction with the small levy funds available. Consideration should be given to potential co-investment and opportunities for collaboration with similar industries.

## APPENDIX 1: Consultation and validation

The process to develop the SIP was as follows:

1. ABCD analysis discussions were held at the inaugural SIAP meeting on August 1, 2016
2. The context was developed through desktop research and engagement with growers between October and December 2016
3. The draft outcomes and strategies were validated with one-on-one phone calls to key growers, researchers and SIAP members in December 2016 as well as an online survey open to all growers
4. The monitoring and evaluation analysis was conducted by Clear Horizons in December 2106
5. The impact assessment analysis was conducted by Consulting & Implementation Services (CIS).

The following individuals contributed to the development of this SIP and their contribution is greatly appreciated:

| Name | Industry Role |
|---|---|
| Brett Guthrey | Persimmons Australia President and NSW Farmers Horticulture Director, Grower |
| Alison Fuss | Persimmons Australia Executive |
| Nick Hobbs | Grower |
| Rodney Dalton | Persimmons Australia, Grower |
| David Oag | QDAF |
| Grant Bignell | QDAF |

## APPENDIX 2:
## Logic hierarchy

| | | | | | | |
|---|---|---|---|---|---|---|
| **Vision** | | | To grow the future of Australia's horticulture industries | | | Common for all Investment |
| **Mission** | Increased profitability of Australia's horticulture industries | | Increased productivity of Australia's horticulture industries | | Increased global competitiveness of Australia's horticulture industries | |
| **Hort Innovation end-of-strategy outcomes** | **Support industry efficiency and sustainability** | **Improve productivity of the supply chain** | **Grow the horticulture value chain capacity** | **Drive long-term domestic and export growth** | **Lead strategically** | |
| **End-of-SIP outcomes** | *The industry-specific outcomes of the SIP. The final desired result of SIP investment but may be achieved after the SIP time-frame. SIP investment may be just one contributing factor to the achievement of these outcomes. For example, incremental productivity, profitability and competitiveness improvements stimulated through R&D, changes in consumer awareness, marketing campaign reach and influence and increased recognition of Australian horticulture products.* | | | | | SIP specific |
| **SIP intermediate outcomes** | *Short- to medium-term changes brought about through the SIP, which will support the achievement of end-of-SIP outcomes. For example, practice changes, adoption, changes in grower knowledge, attitudes, skills and aspirations (KASA) and marketing reach.* | | | | | |
| **SIP activities and outputs** | *What is directly delivered by the SIP (R&D, extension and marketing activities and outputs, for example, products and services, and events and engagement) across the 11 horticulture cross-sectoral investment themes: Pest and Disease Management, Crop Production, Sustainability Improvements, Novel Technologies, Data Insights,Industry Development, Product Integrity, International Market Development, Market Access and Trade, Domestic Market Development, Strategic Drive and Corporate Services.* | | | | | |
| **Foundational activities** | *Preliminary or preparatory activities that are conducted before and during SIP delivery. Includes industry processes, infrastructure and resources that enable the SIP to be developed and delivered. Includes SIP planning, consultation, advisory meetings etc.* | | | | | |

## APPENDIX 3:
## Reference documents


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