

FEBRUARY 2022

Citrus

Strategic Investment Plan 2017-2021

PERFORMANCE REPORT



Citrus SIP performance report

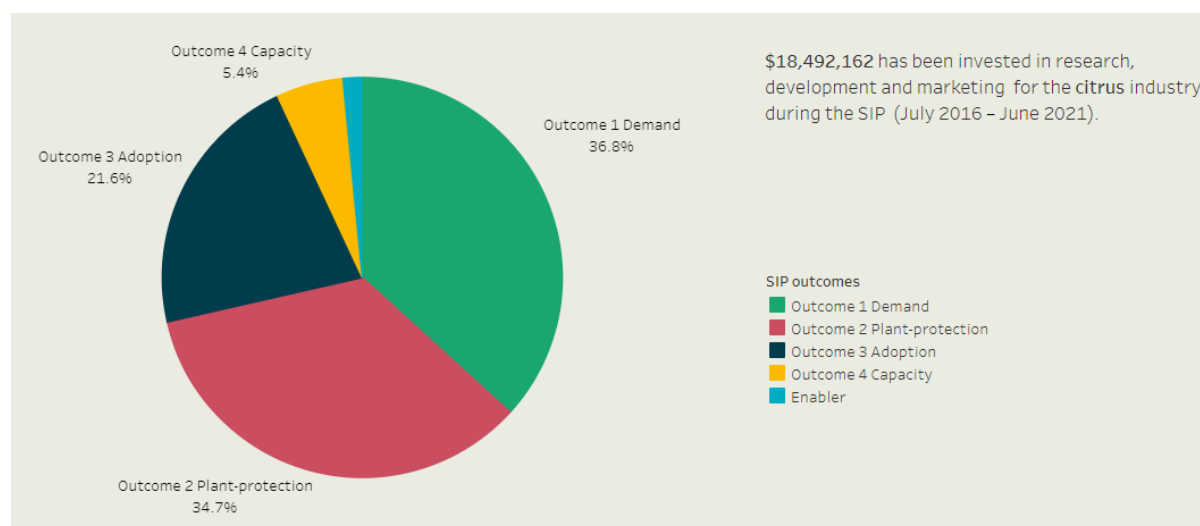
This performance report reviews the performance of levy investments delivered against the citrus Strategic Investment Plan (SIP), which was active for the 5-year period from 2016/17 to 2020/21. The SIP was developed to strategically guide research and development (R&D) and marketing levy investment in accordance with core industry priorities. The SIP featured four outcome areas, nine strategies and 19 key performance indicators (KPIs), summarised in Table 1. A total of \$18.5 million was invested into the Citrus Fund over the 5-year period of the SIP. The total investment expenditure allocated against each outcome is provided in Figure 1.

Table 1: Citrus SIP outcomes

Outcome	Description	Expenditure allocation*
1. Demand	Market opportunities in both domestic and especially export markets have been developed and maintained, leading to increased demand and support for citrus products	36.8%
2. Plant protection	Growers and the industry reduce biosecurity, phytosanitary and agrichemical related risks	34.7%
3. Adoption	Improved product quality and increased productivity from the application of innovation	21.6%
4. Capacity	Industry participants have increased skills, capacity and knowledge	5.4%

*Total investment \$18.5 million as of June 2021. Balance of expenditure comprises of enabler investments, which includes expenditure to support the delivery of the SIP including advisory meeting and publication costs.

Figure 1: Citrus SIP investment expenditure analysis



SIP performance analysis

This performance report reviews the investment achievements delivered within each outcome area that have generated impact for growers. The overall status of each strategic area, informed through an assessment of KPI performance, is also provided. The evaluation status and criteria were:

Strategic area status	Criteria
Achieved	KPIs for this strategic area were met
In progress	Investment delivery remains ongoing
Not achieved	Investment was not prioritised in this strategic area

The results have been informed from evidence compiled through reviewing investment documentation and engagement with project managers. Outcomes generated through the investments are documented and brief case studies of flagship performance and impact for each outcome area are also provided.

Outcome 1: Demand – Market opportunities in both domestic and especially export markets have been developed and maintained, leading to increased demand and support for citrus products

The citrus SIP 2017-2021 noted the major opportunities afforded the Australian citrus industry to increase demand for a high quality product with high quality standards. Australia's relative freedom from citrus pests and diseases and close proximity to Asian markets were seen as potential drivers of increased demand, while increasing protectionist policies in emerging markets, and improving quality in other countries were seen as major challenges.

Summary of strategic area and achievement status:

The strategies in the SIP that were identified to support citrus demand are listed below. An achievement status is provided based upon internal evaluation of project performances:

Strategic area	Status
Develop new and existing export market opportunities	Achieved
Develop new and existing domestic market opportunities	In progress
Provision of accurate and timely market research	Achieved

KPI callouts:

- The *Australian Horticulture Statistics Handbook* (HA18002) reported that the average citrus export volume over the 5-year period of the SIP was 42% higher than the level prior to development of the SIP, to represent on average 33% of production. The proportion of production exported reached a high of 37% of production in 2019/20, which was close to the SIP target of 40%. At the same time, the average export price increased 38%. Combined, these factors increased the value of citrus exports by 94% to reach a high of \$509 million in 2019/20, before moderating to \$442 million in 2020/21, remaining well above the SIP export growth target of \$400 million.
- Domestically, over the 5-year period of the SIP the average fresh supply per person was 14% above levels prior to development of the SIP, with Australian product market share increasing from 89% to 91%. At the same time, the wholesale price per kg was 18% above levels prior to development of the SIP. Combined, this has generated an average citrus wholesale value of 43% above levels prior to development of the SIP, reaching \$686 million in 2020/21.
- Combined, the strong demand in exports and domestic markets have supported a 36% increase in the average farmgate price compared to the average prior to development of the SIP, which has helped to increase the farmgate share of the wholesale price from an average prior to development of the SIP of 51% to a high of 60% in 2019/20.
- The 2014-2020 citrus industry export strategy was renewed through the project *Citrus export strategy renewal* (CT19006) in collaboration with key stakeholders in industry and government. By identifying, sizing and prioritising opportunities in international markets, this project provided the citrus industry with the information needed to guide activities, including future investment into export initiatives.
- Ongoing at the end of the SIP, the rootstock programs *Evaluation of new rootstocks for the Australian citrus industry* (CT18002) and *Breeding new rootstocks for the Australian citrus industry* (CT18004) were tasked with increasing the availability of best varieties and rootstocks, to maximise consumer satisfaction with both fresh and processed Australian product.

Case study: Market development and market access program (CT15012 and CT18002)

The citrus SIP 2017-2021 recognised that increased market access and demand would be critical to ensure a sustainable citrus industry into the future, with export markets being a particular priority. Without this increased market opportunity, expected increased supply would outstrip demand, resulting in lower prices and lower grower incomes.

In line with this industry priority, *Australian citrus industry innovation and market development program* (CT15012) commenced in 2016 and continued from 2019 with *Citrus market development, market access and quality* (CT18002). The program had three focus areas to help the Australian citrus industry continue its strong presence in the global market: maintaining and improving market access; delivering market information; and quality improvement.

Key impacts of the 3-year CT15012 project were the development of market access priorities through engagement with the industry to form the basis of the market access agenda over the course of the project. Strong progress was demonstrated towards achieving the market access objectives of the industry. Notably, improvements to the access conditions into China were achieved in 2017 and today, the market in mainland China is valued at over A\$160 million. In addition to the formal priorities, the team ensured that channels to trade remained open by hosting audits and pre-clearance activities by the overseas authorities. The project team also assisted growers, packers and exporters by providing advice on phytosanitary, food safety, chemical residues and tariffs. There were no major regulatory breaches or market closures during the three-year project.

Outcome 2: Plant protection – Growers and the industry reduce biosecurity, phytosanitary and agrichemical related risks

The citrus SIP 2017-2021 recognised a number of threats related to plant protection including the potential loss of markets due to biosecurity or maximum residue limit (MRL) breaches; local pests and diseases such as gall wasp, island fly and fruit fly; potential new incursions such as huanglongbing (HLB or Citrus Greening) and its vector Asian citrus psyllid (ACP), oriental fruit fly and other exotic diseases; and disease spread through budwood.

Summary of strategic area and achievement status:

The strategies in the SIP that were identified to support citrus plant protection are listed below. An achievement status is provided based upon internal evaluation of project performances:

Strategic area	Status
Safeguard the Australian citrus industry from future biosecurity and phytosanitary risks throughout the value chain	Achieved
Safeguard the Australian citrus industry from injudicious use of agrichemicals throughout the value chain	Achieved

KPI callouts:

- Key investments have reduced the risk of key pests and diseases through improved detection and management, including *Development of national strategies to manage citrus gall wasp* (CT15006), *Development of Phenology Models and a timing guide for the management of Californian red scale in Australian Citrus* (CT15008), and *Improving diagnostics and biosecurity for graft-transmissible diseases in citrus* (CT17007).
- Through *Agrichemical residue monitoring program for Australian citrus exports – stage 2* (CT15016), (and continuing with *Citrus agrichemical and export MRL program* (CT18001)) compliance with MRLs in citrus exports has generally exceeded 99%, with no MRL violations in overseas markets and no regulatory action, highlighting responsible use of agrichemicals in Australian citrus.
- An independent assessment found that the project *Maximising the biosecurity of the Australian Citrus Industry Budwood Facility* (CT17003) delivered a higher level of preparedness of the Australian citrus industry for any future incursion of HLB and ACP. The new budwood preparation facility will reduce the spread of any potential future incursion of HLB, as well as play a major role in re-establishing orchards that may have been affected by any future HLB incursion. In addition to the facility itself, the project has improved biosecurity practices in nurseries producing citrus trees.

Case study: Improving biosecurity preparedness of the Australian citrus industry (CT17001)

The Australian citrus industry faces a number of exotic pest threats that have the potential to severely affect production and/or this ongoing growth in export markets. These include HLB and ACP, citrus canker, citrus variegated chlorosis (*Xylella*) and others. The incursion or establishment of exotic pests could therefore have significant ramifications for industry, regional economies, and national exports.

In recognition of the importance of these pest threats, CT17001 was established to improve the industry's ability to respond to exotic pests, raise awareness amongst the industry of the importance of exotic citrus pests and develop a nationally coordinated program for surveillance activities targeting exotic pests. To achieve these objectives, the project has produced material against five 'themes' (Surveillance, Increased Awareness, Capacity building, Preparedness and Governance).

Key activities and outcomes supporting improved plant protection included:

- Collection of surveillance data for exotic pests through the Korea, China and Thailand program (which covers over 40% of Australian citrus orchards) and establishment of an ACP Trapping Program (which has deployed approximately 300 traps and collected budsticks for the surveillance of graft transmissible diseases in collaboration with CT17007)
- Workshops conducted in all major citrus production regions by the National Citrus Surveillance Coordinator conducted workshops. The workshops provided an opportunity for discussions and transfer of knowledge of biosecurity related information among growers
- Establishment and maintenance of the First Detector Network in the citrus industry to provide support for the early detection of High Priority Pests (HPPs). At the end of the project the network consisted of over 100 members covering all major citrus producing regions in Australia. The network has been beneficial in establishing the ACP Trapping Program and is a key stakeholder group for improving the industry's biosecurity capability.

Outcome 3: Adoption – Improved product quality and increased productivity from the application of innovation

The citrus SIP 2017-2021 recognised that although the Australian citrus industry is not a large contributor globally, it competes very well on quality, particularly against lower-priced competitor-exporting countries. While the industry has been increasing production in recent years, and with further increases in production likely, citrus growers' profitability will improve by increasing productivity (increased yields of first grade fruit per unit of input), decreasing costs, or increasing product quality.

Summary of strategic area and achievement status:

The strategies in the SIP that were identified to support citrus adoption are listed below. An achievement status is provided based upon internal evaluation of project performances:

Strategic area	Status
Undertake R&D and extension to develop and extend improvements in productivity and efficiency across the value chain	In progress
Undertake R&D and extension to enhance product quality (such as flavour and juice content)	Achieved

KPI callouts:

- The project *Australian Citrus Quality standards (Stage 3)* (CT15013) addressed the delivery of good tasting citrus fruit by engaging participants across the supply chain from pre-harvest activities through to retail activity. This was achieved by defining and addressing consumer tastes through improved management of citrus harvesting. An independent *Ex-post impact assessment* (MT18011) found that CT15013 likely contributed to improved alignment with consumer preferences, resulting in increased product quality relating to sweetness and juiciness. A net present value of \$1.83 million and benefit cost ratio of 3.20:1 was quantified.¹
- Ongoing at the end of the SIP, *Improving citrus quality with regulated deficit irrigation* (CT17000) is using irrigation trials to produce guidelines allowing Australian growers to adopt smart, innovative agronomic practices that can deliver improved fruit quality while saving water. The trials have found that stress imposed very early in fruit development increased sugar levels at harvest in M7, Houghton, and Lane. The team also analysed 61 years of historical rainfall data to determine that March and April are the safest months for successful regulated deficit irrigation treatments.

¹ <https://www.horticulture.com.au/contentassets/0943462cdf184be083c1635677de8af5/appendix-4-ct15013.pdf>

Outcome 4: Capacity – Industry participants have increased skills, capacity and knowledge

The citrus SIP 2017-2021 noted that many of the deliverables sought from the SIP's outcomes 1, 2 and 3 required complex skills in horticulture and business, along with enhanced confidence (and resources) to adopt new techniques and technologies. Enhancing this capacity was seen as crucial to a vibrant and confident citrus industry.

Summary of strategic area and achievement status:

The strategies in the SIP that were identified to support citrus industry capacity are listed below. An achievement status is provided based upon internal evaluation of project performances:

Strategic area	Status
Increase skills in existing participants, and attract a new generation of willing participants to the citrus industry	Achieved
Ensure growers and other members of the value chain are fully aware of industry developments	Achieved

KPI callouts:

- The *Citrus industry communications program* (CT15009 and CT18000) was responsible for delivering effective and timely communications to ensure Australian citrus growers and other industry stakeholders were kept up-to-date with the latest R&D and marketing activities, and other industry news and information. Improvements in the Citrus Australia website increased page views by 60%, with the refreshed Seasonal Update page experiencing a 173% increase in views. Targets for *Citrus eNews* e-newsletters and Twitter engagement were also exceeded.
- In 2017 and 2019, *Citrus Technical Forums* (CT16700) brought citrus growers, packers, exporters, researchers, regulators and suppliers of other goods and services together at a single point in time. The technical forums and field days attracted 894 delegates, with 68% of the growers reporting that they would apply the new knowledge and skills to their businesses. Participants also noted that the opportunity to network and meet peers in the industry was a major highlight.