

FEBRUARY 2022

Papaya

Strategic Investment Plan 2017-2021

PERFORMANCE REPORT



Papaya SIP performance report

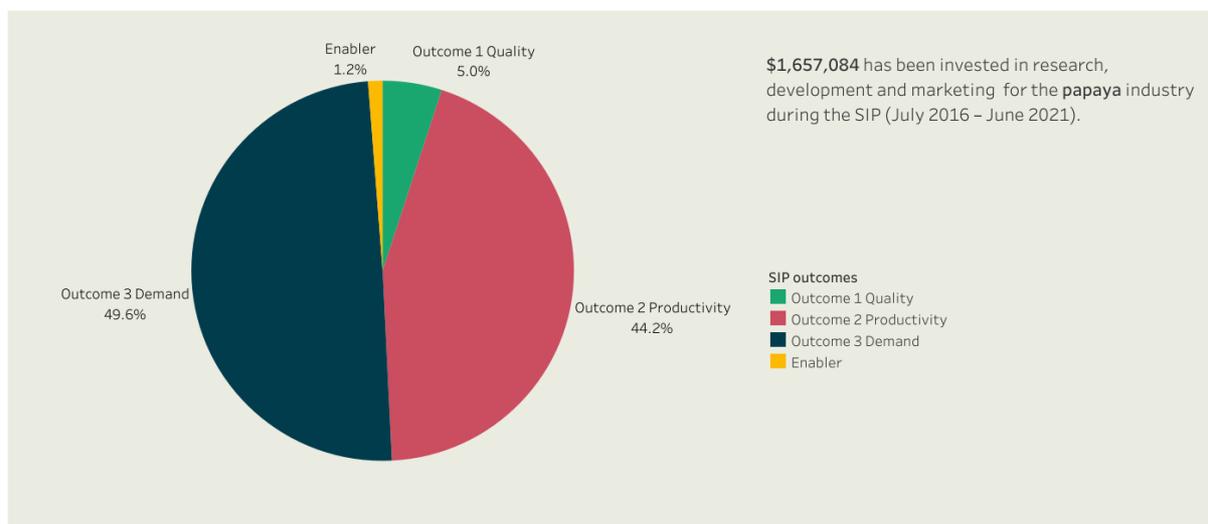
This performance report reviews the performance of levy investments delivered against the papaya Strategic Investment Plan (SIP), which was active for the 5-year period from 2016/17 to 2020/21. The SIP was developed to strategically guide research and development (R&D) and marketing levy investment in accordance with core industry priorities. The SIP featured three outcome areas, 10 strategies and nine key performance indicators (KPIs), summarised in Table 1. A total of \$1.7 million was invested into the Papaya Fund over the 5-year period of the SIP. The total investment expenditure allocated against each outcome is provided in Figure 1.

Table 1: Papaya SIP outcomes

Outcome	Description	Expenditure allocation*
1. Quality	Increased consistency and quality of papaya	5.0%
2. Productivity	Access to new varieties and improved pest and disease management improve growers' productivity and profitability	44.2%
3. Demand	Improved market access and increased consumer demand increase returns to growers	49.6%

*Total investment \$1.7 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: Papaya 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: Quality – Increased consistency and quality of papaya

The papaya SIP 2017-2021 recognised that inconsistent harvest and postharvest practices had resulted in poor uniformity of papaya along with reduced shelf life. A lack of a standard product across the industry meant that consumers couldn't have confidence that quality and taste will be replicated between purchases. Research and adoption of best practice harvest and supply chain management processes was needed to ensure high quality, consistent fruit reaches the consumer more often.

Summary of strategic area and achievement status:

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

Strategic area	Status
Engage with consumers to identify preferred taste and bring this understanding back to farm so growers can consistently provide quality fruit meeting consumer expectations	Achieved
Increase grower focus on quality through improved engagement and dissemination of best practice information	In progress
Research and adopt improved postharvest packing, treatment protocols, storage, distribution and retailer processes to improve quality and increase shelf life	Not achieved

KPI callouts:

- The *National papaya breeding and evaluation program* (PP18000) incorporated sensory work involving professional taste panels and flavour mapping to support the development of premium varieties and drive consumer acceptability and preference for Australian papaya. See case study in outcome 2.

Outcome 2: Productivity – Access to new varieties and improved pest and disease management improves growers’ productivity and profitability

Effective pest and disease management was identified as a challenge for the industry requiring ongoing investment. The industry planned to combat disease through improved access to effective chemicals, as well as the development of new varieties that appeal to the consumers and are resistant to disease and pests.

Summary of strategic area and achievement status:

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

Strategic area	Status
Continue research, trials and adoption of, chemical and other processes use trials for effective pest and disease management	In progress
Continue research and commercialisation of new genetically improved varieties that offer increased disease resistance and consumer appeal	Achieved
Develop and adopt an IPDM plan	Not achieved
Continue to research and refine agronomic practices to improve productivity, quality and environmental outcomes	Not achieved

KPI callouts:

- Ongoing at the end of the SIP, the *Papaya clean seed program* (PP18001) delivered a clean seed protocol to help protect the papaya industry against papaya sticky disease.
- The project *New genetic targets to improve quality in papaya* (PP15000) focused on improving the quality of Australian papaya and producing elite, uniform cultivars. The project also released the *Handbook of Papaya Evaluation* during 2017. The handbook represented the development of a standard, reliable protocol for growers, breeders and researchers to evaluate papaya tree productivity and fruit quality. The investment was continued with *National papaya breeding and evaluation program* (PP18000). (See case study below.)

Case study: National papaya breeding and evaluation program (PP18000)

The project *New genetic targets to improve quality in papaya* (PP15000) focused on improving the quality of Australian papaya and producing elite, uniform cultivars. Following the project's completion, the papaya SIP 2017-2021 invested in PP18000 to continue to breed and evaluated new, elite, and genetically stable red and yellow papaya cultivars that meet the needs of growers and the preferences of consumers, and that are adapted to Australia's key growing areas.

To broaden the genetic base of Australian papaya, seed from diverse sources was obtained under material transfer agreements and biosecurity protocols from Malaysia, Taiwan and Thailand.

PP18000 also incorporated sensory work as a new component in the breeding program, involving professional taste panels and flavour mapping to support the development of premium varieties and drive consumer acceptability and preference for Australian papaya.

Ongoing at the end of the SIP, PP18000 has progressed towards providing genetically stable and superior varieties to the industry. Overall results at the end of the SIP included advanced red breeding lines that performed better than the standard red variety, with fruit set lower to the ground, higher Brix, higher yield, more cylindrical shape, and fruit size of 800-1,100 grams.

Outcome 3: Demand – Improved market access and increased consumer demand increases returns to growers

The papaya SIP 2017-2021 sought to increase demand for Australian papayas through marketing initiatives to debunk consumer flavour perceptions, establishing treatment protocol for Black Spot and compliance with the state quarantine protocols to access Western Australia and Tasmania, and to take advantage of export market opportunities.

Summary of strategic area and achievement status:

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

Strategic area	Status
Increase demand in existing domestic markets through understanding of consumer preference and targeted marketing around these preferences	Achieved
Provide opportunities to access domestic and international new markets	Achieved
Support research, development, adoption of growing practices and marketing initiatives to position papaya as a naturally grown fruit with significant health benefits	Achieved

KPI callouts:

- The *Australian Horticulture Statistics Handbook* (HA18002) reported that the average papaya and pawpaw production value over the 5-year period of the SIP was 32% higher than the average prior to development of the SIP, driven by an 20% increase in production and a 15% increase in farmgate prices over the same period.
- In the domestic market, *Australian Horticulture Statistics Handbook* (HA18002) reported the average fresh supply per person over the 5-year period of the SIP, was 12% higher than levels prior to development of the SIP, increasing to 0.7 kg, which when combined with 11% higher wholesale prices, indicates increased consumer perceptions of and willingness to pay for papayas.
- The project *Papaya Consumer Research* (PP17001), focused on developing consumer insights to support the papaya marketing program. Building consumer awareness and encouraging trial was identified as the major opportunity to expand domestic demand.
- To support awareness and trial, in-store samples within major retailers and at the 2018 and 2019 Royal Easter Show were delivered. The Australian Papaya Facebook and Instagram sites, supported by the marketing levy, have been leveraged to drive ongoing consumer engagement. Since 2017, more than 10,000 additional page 'likes' have been achieved, indicating expanded consumer awareness, in addition to ongoing media coverage supported by the Australian Papaya website.
- The *Tropical fruit export strategy* (MT17002) developed individual export strategies for a range of tropical commodities including papaya, feeding into an overarching export strategy for Australian tropical fruit. The new *Papaya Industry Export Market Development Strategy* was released in May 2018 identifying risks and opportunities for increased exports of Australian papayas.