

FEBRUARY 2022

Mango

Strategic Investment Plan 2017-2021

PERFORMANCE REPORT



Mango SIP performance report

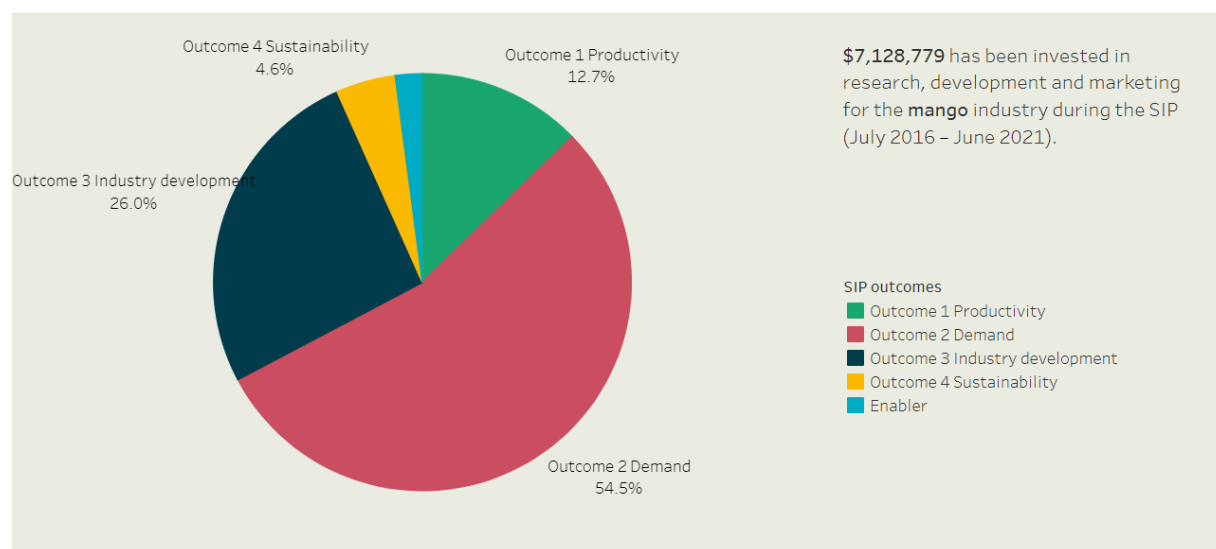
This performance report reviews the performance of levy investments delivered against the mango Strategic Investment Plan (SIP), which was active for the 5-year period from 2016/17 to 2020/21. The SIP was developed to strategically guide research and development (R&D) and marketing levy investment in accordance with core industry priorities. The SIP featured four outcome areas, 20 strategies and 32 key performance indicators (KPIs), summarised in Table 1. A total of \$7.1 million was invested into the Mango Fund over the 5-year period of the SIP. The total investment expenditure allocated against each outcome is provided in Figure 1.

Table 1: Mango SIP outcomes

Outcome	Description	Expenditure allocation*
1. Productivity	Increased industry productivity through increased yields and reduced costs per hectare	12.7%
2. Demand	Increased grower profitability through increased consumer demand for Australian mangoes	54.5%
3. Industry development	Increased R&D and extension capacity and resources supporting industry development	26.0%
4. Sustainability	Improved industry sustainability and management of risks	4.6%

**Total investment \$7.1 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: Mango 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: Productivity – Increased industry productivity through increased yields and reduced costs per hectare

The strategic intent of this outcome was to increase on-farm productivity through increased yield, and reduced costs per hectare. Stabilising production will contribute by reducing risk and better matching use of capital, labour and resources to produce the volume and quality of fruit to meet demand.

Summary of strategic area and achievement status:

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

Strategic area	Status
Adopt new high-yielding mango varieties more quickly	Not achieved
Value add: 100% use of fruit, trees, and resources such as water	Not achieved
Increase skilled labour and improve labour efficiency	In progress
Reduce on-farm costs through greater use of technology	In progress
Develop and implement best practices on-farm	In progress
Communicate changes to best practice recommendations within industry	Achieved

KPI callouts:

- The *Australian Horticulture Statistics Handbook* (HA18002) reported the average mango production over the 5-year period of the SIP was 15% above levels prior to the development of the SIP, averaging 68,650 tonnes. The SIP had a KPI of a 15% improvement in on-farm yields by 2021, however, tree density or planted area are not reported to evaluate this KPI.
- A key focus of *Building best management practice capacity for the Australian mango industry* (MG17000) was to develop an updated Best Practice Resource (BRP) for mangoes, which went live on the Australian Mango Industry Association (AMIA) website in 2021, providing a single point where growers could source information about recommended production, postharvest, supply chain, and export practices, and also providing growers with a mechanism to review and benchmark their current practices.
- Industry adoption of non-destructive dry matter assessments was increased through *On-farm quality testing utilising near infrared (NIR) technology* (MG17002), which conducted over 8,000 scans on 90 mango orchards.
- The mango season has been extended to cover more than half the year, with multiple mango varieties available in commercial quantities as early as July and as late as March.

Case study: On-farm quality testing utilising near infrared (NIR) technology (MG17002)

Near Infra-red (NIR) scanning of fruit with a Felix 750 Produce Quality Meter was established as a useful tool for the mango industry through project MG16002 *Fruit maturity assessment on farm using near-infrared technology* over 2016-2017. The project found NIR could assess the percentage of dry matter contained in the flesh of the fruit without damaging the appearance of the fruit as previously occurred for dry matter analysis. This allowed a high volume of fruit to be sampled quickly and non-destructively, which could be done in the field before harvest, in the packing shed or in the market.

MG16002 identified the importance of ongoing access to technical support for calibration of the meters for each region, variety and season, as well as the need for ongoing training and extension support for correct use and interpretation of the results. MG17002 *On-farm quality testing utilising near infrared (NIR) technology* was delivered from 2017 to 2018 to continue to encourage growers to use the NIR meters as part of the decision to pick.

The research provider (AMIA) initially targeted all 70 growers on the forecasting database, who represented approximately 90% of production, the program was also communicated through the AMIA newsletter encouraging other growers to participate. MG16002 conducted over 6,000 scans across five varieties on 61 orchards in Qld, NSW and the NT in the 2017 season, reliably calibrating the meters for Calypso, Honey Gold, Kensington Pride, and R2E2 mango varieties. MG17002 expanded the scope of industry support and adoption in the 2018 season, by conducting over 8,000 scans on 90 orchards QLD, NSW, NT, and expanding into WA. On farm testing support was continued through MG17000 *Building best management practice capacity for the Australian mango industry*, which conducted over 10,000 tests on 131 orchards in 2019, nearly 9,000 tests on 107 orchards in 2020, and over 6,000 tests across 155 orchards for the 2021 season.

Outcome 2: Demand – Increased grower profitability through increased consumer demand for Australian mangoes

The strategic intent of this outcome was to increase grower profitability through increased consumer demand for Australian mangoes, by continuing to implement successful marketing initiatives that link consumer insights to the unique characteristics of Australian mangoes, including the exquisite eating experience, seasonal availability, value for money, emotional attributes, and health benefits. The desired outcome is to increase domestic demand while maximising the value of mangoes.

Summary of strategic area and achievement status:

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

Strategic area	Status
Develop new export markets to increase demand	Achieved
Develop and implement the mango marketing/market development plan	Achieved
Achieve a consistent supply of quality mangoes by accurately forecasting the volume of production of different varieties, the quality of the fruit, and the timing of when fruit will be sent to market	Achieved
Engage retailers so they understand the various varieties of fruit, the way to handle and display them, are confident of volume and quantity information for mango supply, and are aware of how mangoes attract customers into their store	Achieved
Undertake supply/value chain analysis to identify best practice	Achieved

KPI callouts:

- The *Australian Horticulture Statistics Handbook* (HA18002) reported Australian production share of the domestic market remained at 98% over the past five years. Fresh supply per person increased 8.5% from levels prior to development of the SIP to average 2.3 kg/person/year over the SIP period. Purchase quantity per shop increased 10% from 0.9 kg/person to 1 kg/person.
- The project *Consumer market research for Australian mangoes 2019-20* (MG19000) reported that consumer satisfaction with mango quality increased from 82% in 2014 to 86% in 2019.
- *Tropical Fruit Export Strategy* (MT17002) supported growth into new export markets. Based on factors such as Australia's competitiveness, market propensity to consume, and demographics and social economics, key markets were identified which have since seen strong growth including South Korea (+217% share of Australia's exports) and the USA (+176%). During the SIP, the 4-year average mango export market concentration index (0=diverse, 100=highly concentrated) improved to 17 compared to an average of 24 prior to development of the SIP.
- *Building best management practice capacity* (MG17000) for the Australian Mango Industry has continued to accurately forecast the volume of production of different varieties, the quality of the fruit, and the timing of when fruit will be sent to market through engagement with growers representing 90% of industry production. The project has also provided updated supply chain best practice.

- *Data collection to facilitate supply chain transparency – stage 3 (MG15003) and Mango supply chain data collection – phase 4 (MG17006)* provided growers and other industry participants with timely supply chain data on mango wholesale prices and eating quality. Through the AMIA website and *My Mango* e-newsletter, this independently collected data gave growers clear signals on market conditions, allowing sound business decisions to be made throughout the season.

Case study: Domestic and export marketing

The focus for mango domestic marketing was delivery of disruptive PR, social media and influencers, as well as extensive retailer engagement including retailer pre-season events, grower pre-season events, a grower market tour, point of purchase displays, retailer head office launches; retailer tool kits, mango sales challenges and other activities as opportunities arose.

Aussie Mangoes embarked on its first branded partnership, with the iconic summer brand, Budgie Smugglers. Throughout the period this approach was built upon, launching the Mango Mess-tival on Sydney's iconic Bondi Beach, and partnering with the Spring Racing Carnival and Foodbank.

Aussie Mangos worked throughout the period with notable social media influencers, sharing lifestyle and recipe content to national audiences.

Aussie Mangoes invested in four key export markets – New Zealand, South Korea, USA and Hong Kong – to build strong, collaborative relationships between growers, exporters, importers, and retailers. Promotional activities included in-store point of sale material, button badges for store staff, catalogues, out-of-home advertising, sales challenge competitions, social media, influencers, online shopping, and TV home shopping.

Outcome 3: Industry development – Increased R&D and extension capacity and resources supporting industry development

The strategic intent of this outcome was to build a powerful and responsive industry that was aligned to implement the strategic plan effectively. It required capability and high engagement levels to identify and prioritise R&D and extension needs, and to build the required stock of information, new knowledge and technologies. It required strong leadership to develop rapid industry responses through capacity building, communication and extension programs.

Summary of strategic area and achievement status:

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

Strategic area	Status
Establish effective extension and industry development services to support the adoption of R&D outputs and industry capacity building	Achieved
Identify and document R&D and extension issues	In progress
Identify other funding sources to support R&D and extension aimed at increasing industry profitability	Not achieved
Develop industry and research provider capacity	Achieved
Partner with other organisations, industries, enterprises, overseas co-contributor aid programs	Not achieved

KPI callouts:

- The project *Building best management practice capacity for the Australian mango industry* (MG17000) established supported best practice adoption through the development of a new BPR, as well as the delivery of pre-season regional road shows across the Northern Territory, Queensland, and Western Australia with a collective attendance of 274 growers.
- *National mango industry communication program 2016-17* (MG15006) delivered timely and relevant industry information to Australian mango growers and other industry participants including *Mango Matters*, *My Mango*, *The Slice*, and the industry website. Feedback found that 90% of stakeholders found *Mango Matters* to be very good or good, 95% found *My Mango* to be very good or good, and 72% found *The Slice* to be very good or good. 61% rated the website as very good or good.

Case study: Building best management practice capacity for the Australian mango industry (MG17000)

From 2018 to 2022 this investment was the latest project to support adoption of industry best practice, and enhance the capacity of mango industry participants.

A key focus of MG17000 was to develop an updated BPR for mangoes, as prior to this project, the closest resource to a mango industry BPR was the 'Mango Information Kit' (QDPI, 1999). The new BPR went live on the AMIA website in 2021, providing a single point where growers could source information about recommended production, postharvest, supply chain, and export practices, and also providing growers with a mechanism to review and benchmark their current practices. The BPR was among the top four pages visited on the AMIA website (behind crop forecast and market prices) with over 2,000 page views in the first five months.

In addition to the BPR, MG17000 also delivered other key industry capacity activities, including:

- Supporting the role and activities of mango industry development manager and region-specific industry development officers.
- Continuing the on-farm quality testing utilising near infrared (NIR) technology from MG17002, and increasing the number of scans and farms visited (see outcome 1)
- Continuing mango production forecasting by engaging growers representing 90% of industry production
- Supporting export development by reviewing applications, and delivering crop monitoring training for access to key markets including China, Korea and the USA
- Delivering pre-season regional road shows across the NT, QLD, and WA with a collective attendance of 274 growers.

Outcome 4: Sustainability – Improved industry sustainability and management of risks

The strategic intent of this outcome was to build a powerful and responsive capability for collection, analysis and rapid flows of timely information that is used to inform business decisions, including mitigating risk, securing profit levels and appropriate rates of return on investment (ROI). Achieving sustainability also included addressing the issues while relying on current approaches to managing pests and diseases.

Summary of strategic area and achievement status:

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

Strategic area	Status
Participate in providing more accurate and timely data to benchmark industry sustainability and industry credentials, including return on investment	In progress
Undertake more R&D into environmental sustainability, biosecurity and resource management	Not achieved
Lead the industry (people) to become a unified group	Achieved
Review world-recognised environmental awareness programs	Not achieved

KPI callouts:

- The project *Review of National Biosecurity Plans (Avocado and Mango)* (MT17003) maintained and updated the industry's top-level biosecurity documents that identify high-priority endemic and exotic pests, diseases and weeds, along with the risk mitigation activities required to reduce their biosecurity threat, and surveillance and diagnostic activities. They provide a strategic framework for industry and government to work together to improve preparedness for and response to these potential threats.
- The multi-industry *Australian-grown Horticulture Sustainability Framework* (HA19001) provided a guide to help the mango industry and wider horticulture sector share its sustainable, ethical, and safe farming practice stories with stakeholders. The initiative aimed to help the industry share their sustainability credentials and stories, as consumers and investors increasingly ask for evidence of ethical and sustainable practices from their food producers.
- Projects *Engaging Leaders in the Australian Horticulture Industry* (LP16001) and *12th Biennial Australian Mangoes Conference partnership* (MG18000) supported increased networking and collaboration within the mango industry. The Australian Mangoes Conference 2019 had attendance of 230 industry professionals and 20 trade exhibitors, with 92% of stakeholders reporting the conference to have been very good or good.