

Pineapple

Strategic Investment Plan

2022-2026



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EXECUTIVE SUMMARY

The overarching strategic intent of this Strategic Investment Plan (SIP) is to drive profitability and productivity of the Australian pineapple industry by innovating for varietal improvement, improved disease resistance and best management practices (BMPs) for consistent superior fruit quality that drives increases in domestic consumer demand.

The pineapple SIP 2022-2026 provides a roadmap to guide Hort Innovation's investment of pineapple industry levies and Australian Government contributions, ensuring investment decisions are aligned with industry priorities.

The Australian pineapple industry situation in 2019/20 is described on **page 4** with further information provided in **Appendix 1**. Pineapple production has reduced over the past eight years, from a volume of 88,408 tonnes in 2012/13 to 66,069 tonnes in 2019/20. Production volume is predicted to remain stable over the next five years. Unit price has also remained stable in recent years at around \$0.79 per kilogram, however this represents a reduction in real prices when considering inflation. Pineapples are produced primarily in Queensland with the major production areas including South East Queensland (from Beerwah to Wamuran), Mareeba, Rollingstone, Yeppoon and Wide Bay, and Darwin in the Northern Territory.

The strategic intent of the pineapple SIP provides a summary of how the pineapple industry will drive change over the life of the SIP which will ultimately be achieved by growers having access to new varieties with superior production and quality attributes and via tools for improving fruit quality through the supply chain to meet the demands of Australian consumers.

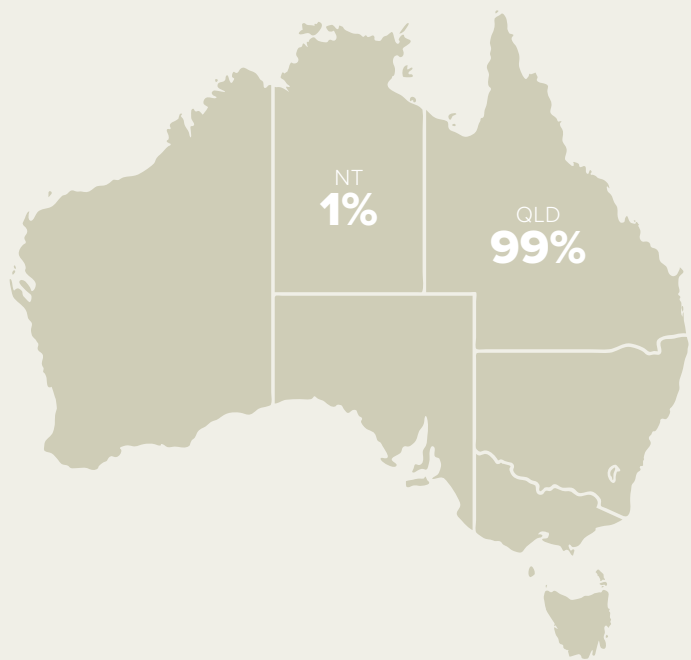
The financial estimates give an indicative overview of the funding availability for the period of FY2022-FY2026. Currently the pineapple research and development (R&D) fund has capacity to invest in new projects from FY2022. Careful prioritisation of future investment needs is required over the next five years.

The four outcome areas of this SIP cover significant themes under which programs and investments will be focused. These are listed in priority order for the pineapple industry. Demand continues to be a focus for the industry as it aims to raise awareness of product attributes and target consumer preference through consistent product quality. Under the outcome of productivity, strategies to improve product quality, such as access to new varieties with superior genetics, new tools for improved production practices and supply chain management are the highest priorities to improve productivity and profitability for growers. Extension and communications, BMPs and new information, particularly relating to the highest priority areas, are also key to the industry's success.

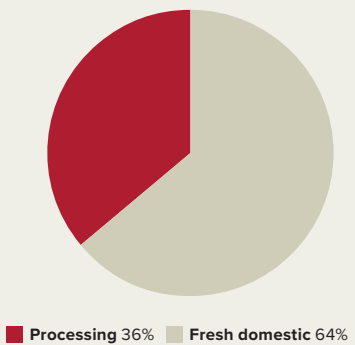
The key performance indicators (KPIs) detail how we measure the impact of each strategy, for example, increased consideration of Australian pineapples by consumers year-round, grower-led trial sites featuring advanced selections and new varieties, and adoption of BMPs to manage quality and improve environmental outcomes.



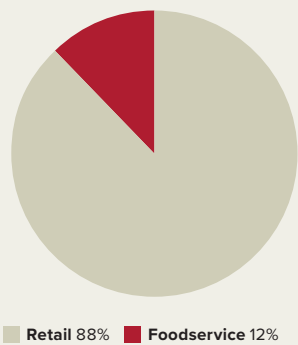
PRODUCTION REGIONS:



FRESH DOMESTIC/PROCESSING:



RETAIL VS FOODSERVICE:



PRODUCTION WINDOW:



Year-round

NUMBER OF GROWERS:



70

PER CAPITA CONSUMPTION:



1.6 kg

in 2019/20

PRODUCTION VOLUMES:



66,069 tonnes

in 2019/20

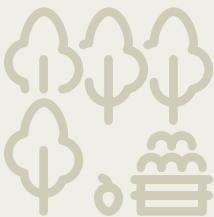
FARMGATE VALUE OF PRODUCT:



\$52.2 million

in 2019/20

VARIETIES:



Smooth Cayenne

65.2%

73-50
29.4%

MD2
3.6%

Aus Jubilee
1%

Aus Festival
0.4%

Aus-Carnivale
0.1%

Rough
0.3%

Source: Pineapple Integrated Crop Protection Program (PI17001, MS106)

THE PINEAPPLE STRATEGIC INVESTMENT PLAN

The pineapple SIP is the roadmap that will guide Hort Innovation's oversight and management of the pineapple industry's investment programs. It lays the foundation for decision-making in investments and represents the balanced interest of the whole industry. The important function of this SIP is to ensure that the investment decisions align with pineapple industry priorities.

Hort Innovation has led the process for preparing the refresh of the pineapple SIP, listening and engaging with levy payers and key stakeholders including Industry Representative Bodies (IRBs) and expertise available through advisory mechanisms and delivery partners. The refresh process involved consultation with and input from a wide range of levy payers, objective analysis of performance and learning from the previous SIP, as well as environmental scanning to identify emergent trends and issues that could impact on future industry profitability and sustainability.

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

The whole-of-company approach taken by Hort Innovation to produce this SIP has harnessed existing external and internal knowledge, learning, partnerships and relationships. The output is a tailored plan with which the pineapple industry can be confident of its strategic intent, including visibility on how investment impacts will be identified. Specific investments to address the SIP strategies and align with industry strategic priorities will be outlined in detail via the pineapple Annual Investment Plan (AIP). The AIP will be published each year over the lifespan of the SIP and detail the investments that will be prioritised based on potential industry impact, as well as the availability of levy funds. Hort Innovation will advise industry stakeholders when the AIP has been published via established communication channels each year. The AIP will be developed with input from the pineapple Strategic Investment Advisory Panel (SIAP), IRBs and other key stakeholders.

Producers in the pineapple industry pay levies to the Department of Agriculture, Water and the Environment, which is responsible for the collection, administration and disbursement of levies and charges on behalf of Australian agricultural industries.

Agricultural levies and charges are imposed on primary producers by government at the request of industry to collectively fund R&D, marketing, biosecurity, and residue testing programs.

Levy is payable on pineapples that are produced in Australia and either sold by the producer or used by the producer in the production of other goods. The research and development (R&D) levy on pineapple is set at \$2.90 per tonne for fresh fruit, and \$1.90 per tonne for processing. The marketing levy is set at \$2.00 per tonne.

Hort Innovation has developed this SIP for the pineapple industry to strategically invest the collected pineapple levy funds into the priority areas identified and agreed by the pineapple industry.

This SIP represents the Australian pineapple industry's collective view of its R&D and marketing needs over the next five years (2022-2026). Learning, achievements and analysis of the previous SIP, consultation with Australian pineapple levy payers, and synthesis of various strategic documents have been incorporated into the development of this SIP.

Appendix 3 acknowledges the people who were consulted in the preparation and validation of this SIP. Statistics and data within this publication are sourced from the Australian Horticulture Statistic Handbook 2019/20 and other documents unless stated otherwise and are listed in **Appendix 4**. A list of acronyms used within the document is available in **Appendix 5**.

Financial estimates

The annual revenue from levy income and Australian Government contributions for eligible R&D set the overall budget parameters for the pineapple SIP. Importantly, a portion of these funds is already committed, as the industry has current multi-year projects for R&D and marketing activities. In addition, the levy income from year to year will vary due to changes in seasonal and market conditions.

The financial estimates used for the purpose of developing this SIP are presented in **Table 1** below and are indicative. The intention of the table is to offer a strategic overview of the industry fund at a specific point in time, and the figures will be regularly reviewed to reflect the latest information for the industry and any changes in investment priority. Further details will be available within the AIP each year.

TABLE 1. Indicative financial estimates for the pineapple SIP over the life of the SIP

	2022 \$	2023 \$	2024 \$	2025 \$	2026 \$
R&D					
Balance end FY2021	205,434				
Estimated levy funds (growers)	160,000	160,000	160,000	160,000	160,000
Australian Government contribution	250,528	242,371	133,509	161,150	110,915
Current investments	206,900	333,000	27,500	74,600	29,000
New investments	220,000	80,000	200,000	200,000	160,000
Total project investments	426,900	413,000	227,500	274,600	189,000
CCR	74,156	71,742	39,519	47,700	32,831
Projected end balance	125,000	49,000	80,000	82,500	136,000
MARKETING					
Balance end FY2021	65,481				
Estimated levy funds (growers)	80,000	80,000	75,000	75,000	75,000
Current investments	65,000	–	–	–	–
New investments	–	50,000	50,000	50,000	50,000
Total project investments	65,000	50,000	50,000	50,000	50,000
CCR	14,496	11,151	11,151	11,151	11,151
Projected end balance	38,000	52,000	61,000	70,000	78,000

Disclaimer: All figures are indicative only and may change depending on actual income and expenditure.

Balance end FY2021 – The closing balance of the fund as at 30 June 2021

Estimated levy funds – Net levy income/revenue that is generated and collected by levy revenue services (LRS)

Australian Government contribution – Amount of contribution from the Australian Government on R&D levy-funded expenditure

Current investments – Current estimated value of contracted projects

New investments – The estimated dollar value that is available for potential new investments for industry subject to industry advice

CCR – Corporate cost recovery: the cost to implement and manage R&D and marketing investment programs for each industry

Projected end balance – Forecast of the anticipated final position of the fund

PINEAPPLE INDUSTRY OUTCOMES



The overarching strategic intent of this SIP is to drive profitability and productivity of the Australian pineapple industry by innovating for varietal improvement, superior yields, improved disease resistance and BMPs for consistent fruit quality that drives increases in domestic consumer demand.

Industry outcomes

Outcome statements identified and prioritised by the pineapple industry have been prepared under four key areas of: demand creation; industry supply, productivity and sustainability; extension and capability; and business insights.

OUTCOME 1: Demand creation

Contribute to improving consumer knowledge, attitudes and purchase intent to drive volume growth.

Demand creation will support industry to develop existing and future domestic markets. This will contribute to improved consumer knowledge and attitudes, in addition to encouraging purchase intent to drive category volume growth.

The strategic intent of this outcome is to maintain and strengthen consumer demand, as the foundation for sustainable expansion of production and consumption in domestic markets. It means the industry is investing to:

- Broaden consumer awareness so that pineapples are more top of mind and purchased more often
- Support product positioning with consistent quality, evidence of beneficial product health attributes and responsible industry production practices
- Develop strong relationships across the supply chain with a shared goal to grow the category.

OUTCOME 2: Industry supply, productivity and sustainability

Improve industry productivity (inputs/outputs) to maintain competitiveness, viability and sustainability of supply.

Supply and productivity will be supported through improvements to production efficiencies which will drive profitability outcomes, while ensuring long-term sustainability outcomes.

The strategic intent of this outcome is to accelerate the application of production practices to optimise returns and reduce risk to growers. Achieving the outcome will involve:

- Research that supports improvements in BMPs to improve quality for the end consumer supported by practical demonstration sites
- Development of new varieties with superior production and consistent fruit quality
- Proactively monitoring potential crop protection regulatory threats and having access to a broader suite of effective, socially acceptable and environmentally sound crop protection solutions.

OUTCOME 3: Extension and capability

Building capability and innovative culture.

Building capability and an innovative culture will support industry cohesion and increase knowledge, attitudes, skills and aspirations (KASA) to use investment outputs across the supply and demand initiatives to better manage risk and create positive change.

The strategic intent of this outcome is to manage knowledge, relationships, systems and processes required to communicate effectively with internal and external stakeholders. Achieving the outcome will involve:

- A change in KASA and practice for grower/industry profitability and sustainability through use of BMPs and innovation
- Growers, value chain, media and governments being well informed on industry initiatives and achievements as a vital part of regional communities and networks
- Improved networks and cross-industry collaboration to increase on-farm use of R&D outputs and to build a stronger more resilient industry
- Proactive strategic and evidence-based decision-making in businesses and for industry on investment, priorities and risk management.

OUTCOME 4: Business insights

Measure industry supply (production) and demand (consumer behaviour) data and insights to inform decision-making.

Business insights will support the industry to keep abreast of market and industry trends to drive informed decision-making.

The strategic intent of this outcome is to deliver data and insights which is foundational to achieving success in the other three outcome areas of demand creation; industry supply, productivity and sustainability; and extension and capability.

Achieving the outcome will involve reliable baseline data and analysis to provide insights and understand current and emerging trends. Key investments will support the provision of consumer knowledge and tracking, production statistics, forecasting and independent reviews to enable better decision-making process at industry level and individual businesses.

These investments underpin and are complementary to the delivery of the other outcome areas.

The important function of this SIP is to ensure that the investment decisions align with pineapple industry priorities.

PINEAPPLE INDUSTRY STRATEGIES

Strategies to address industry investment priorities

The strategies and identified impacts for each of the key outcome areas are described in the tables below. The highest priority investments lay the foundation for the SIP, and its implementation will require a balanced approach to ensure the industry has a high likelihood of success over the short term (0-3 years), medium term (3-5 years) and long term (5-10 years).

The ability to deliver on these strategies (and subsequent investments) will be determined by the ability of the statutory levy to provide adequate or sufficient resources. Further resources and efficiencies may become available through alternative funding sources such as Hort Frontiers strategic partnership initiative, external grants and/or cross-industry initiatives.

OUTCOME 1: Demand creation

Demand creation supports the Australian pineapple industry to develop existing and future domestic markets.

STRATEGIES	POTENTIAL BENEFIT OR IMPACT
1. Increase domestic consumer demand for fresh, quality Australian pineapples through knowledge, attitudes and purchase intent	<ul style="list-style-type: none"> Increased consumer demand for Australian pineapples

OUTCOME 2: Industry supply, productivity and sustainability

The Australian pineapple industry has increased profitability, efficiency and sustainability through innovative R&D, sustainable BMPs and varieties.

STRATEGIES	POTENTIAL BENEFIT OR IMPACT
1. Develop production practices and supply chain management for consistent and improved pineapple quality	<ul style="list-style-type: none"> Improved pineapple quality by advances in crop protection, non-invasive quality, maturity testing and varieties Improved shelf life and increased profitability
2. Develop new varieties with superior production, improved disease resistance and enhanced consumer appeal	<ul style="list-style-type: none"> Improved profitability and increased consumer demand with the availability of varieties developed for Australian growing environments
3. Improve industry preparedness and resilience to biosecurity threats	<ul style="list-style-type: none"> Improved industry biosecurity preparedness reducing the impact of incursions
4. Prioritise the major crop protection gaps through a Strategic Agrichemical Review Process (SARP)*	<ul style="list-style-type: none"> Available registered or permitted pesticides are evaluated for overall suitability against major disease, insect pests and weed threats. The SARP aims to identify potential future solutions where tools are unavailable or unsuitable
5. Support and co-ordinate crop protection regulatory activities with the potential to impact plant protection product access, both in Australia and internationally*	<ul style="list-style-type: none"> Regulatory Risk Assessments have informed proactive strategic priority setting to avoid pest management gaps in the event access or use is negatively impacted
6. Generate residue, efficacy and crop safety data to support applications to the Australian Pesticides and Veterinary Medicines Authority (APVMA) that seeks to gain, maintain or broaden access to priority uses for label registrations and/or minor use permits for crop protection needs*	<ul style="list-style-type: none"> Crop protection solutions to meet industry priority needs as identified in the industry SARP or biosecurity plan

OUTCOME 3: Extension and capability

Building capability and an innovative culture in the Australian pineapple industry maximises investments in productivity and demand.

STRATEGIES	POTENTIAL BENEFIT OR IMPACT
1. Deliver extension and communication capability to support positive change in the areas of sustainability, fruit quality, biosecurity and adoption of new varieties	<ul style="list-style-type: none"> A progression in KASA and practice change for grower/ industry profitability and sustainability through use of best practice and innovating
2. Provide opportunity for engagement between industry members, relevant stakeholders and across horticulture	<ul style="list-style-type: none"> Improved networks and cross-industry collaboration to increase efficiencies and use of R&D outputs and build a stronger more resilient industry
3. Strengthen industry leadership through initiatives and training	<ul style="list-style-type: none"> Evidence of proactive strategic and evidence-based decision-making in businesses and for industry on investment, priorities and risk management

OUTCOME 4: Business insights

The Australian pineapple industry is more profitable through informed decision-making using consumer knowledge and tracking, production statistics and forecasting and independent reviews.

STRATEGIES	POTENTIAL BENEFIT OR IMPACT
1. Increase industry alignment with quality and brand-positioning opportunities driven by consumer insights*	<ul style="list-style-type: none"> Provide business insights to deliver against demand, supply and extension outcomes
2. Use production forecasts to inform long-term and/or in-season domestic market planning and supply strategies	<ul style="list-style-type: none"> Optimised industry resource allocation towards profitable markets

* Foundational investments provide data and information that underpin the delivery of other SIP outcome areas and will be aligned to this strategy. Foundational investment areas include:

- Consumer behavioural data
- Consumer usage and attitudes, and brand health tracking data
- Impact assessments
- Trade data
- Crop protectant data.





PINEAPPLE SIP MONITORING AND EVALUATION

The pineapple SIP Monitoring and Evaluation (M&E) Framework development has been informed by Hort Innovation's Organisational Evaluation Framework.

Progress against the SIP will be reported in Hort Innovation publications and through industry communication channels. The SIP outcomes and strategies are used to inform KPIs that in turn drive the investments and individual projects to deliver on the SIP. Projects responsible for delivering the strategy aligned with each KPI will collect the data.

An M&E and reporting framework is shown below. The framework shows what will be measured to demonstrate progress against the SIP and how metrics will be tracked. Reporting on KPIs will be processed through various formal channels to inform industry and government investors of progress, performance, and impact. Data sources to support M&E will be identified and collected as part of the requirements for each levy investment.

Hort Innovation will facilitate the regular review of the SIP to ensure it remains relevant to industry.

Pineapple SIP Monitoring and Evaluation Framework

The Pineapple SIP M&E Framework is shown below. It includes KPIs and data collection methods both at a macro/industry (trend) level and at more specific SIP strategic level/s.

OUTCOME	STRATEGIES	KPIs
Demand creation		
Outcome 1: Demand creation supports the Australian pineapple industry to develop existing and future domestic markets.	1. Increase domestic consumer demand for fresh, quality Australian pineapples through knowledge, attitudes and purchase intent	<ul style="list-style-type: none">• Positive influence on consumer preference, knowledge, attitudes, and purchase intent• Positive shifts in brand tracking• Use of nutritional information to support consumer demand



OUTCOME	STRATEGIES	KPIs
Industry supply, productivity and sustainability		
Outcome 2: The Australian pineapple industry has increased profitability, efficiency and sustainability through innovative R&D, sustainable BMPs and varieties.	1. Develop production practices and supply chain management for consistent and improved pineapple quality	<ul style="list-style-type: none"> Advancements in supply chain understanding with growers (e.g., survey)
	2. Develop new varieties with superior production, improved disease resistance and enhanced consumer appeal	<ul style="list-style-type: none"> Availability of new varieties with super production and quality attributes developed for Australian growing conditions New knowledge distributed for growers, including data, on the performance of advanced selections and varieties Grower-led trial sites featuring advanced selections and new varieties
	3. Improve industry preparedness and resilience to biosecurity threats	<ul style="list-style-type: none"> Maintenance/tracking of the implementation of an industry biosecurity plan Development of risk analyses of high priority pests including entry pathways, establishment and spread potential
	4. Prioritise the major crop protection gaps through a SARP*	<ul style="list-style-type: none"> Coordinated industry priority setting with a clear outlook of gaps and risks in existing pest control options Industry priority needs published and shared with stakeholders, including registrants
	5. Support and co-ordinate for crop protection regulatory activities with the potential to impact plant protection product access, both in Australia and internationally*	<ul style="list-style-type: none"> Regulatory Risk Assessments maintained
	6. Generate residue, efficacy and crop safety data to support applications to the APVMA that seeks to gain, maintain or broaden access to priority uses for label registrations and/or minor use permits for crop protection needs*	<ul style="list-style-type: none"> Data to support applications to the APVMA and the establishment of Maximum Residue Limits (MRLs)



OUTCOME	STRATEGIES	KPIs
Extension and capability		
Outcome 3: Improved capability and an innovative culture in the Australian pineapple industry maximises investments in productivity and demand.	1. Deliver extension and communication capability to support positive change in the areas of sustainability, fruit quality, biosecurity and adoption of new varieties	<ul style="list-style-type: none"> A baseline established, followed by increased industry hectares with positive change in KASA and practice concerning targeted high priority areas
	2. Provide opportunity for engagement between industry members, relevant stakeholders and across horticulture	<ul style="list-style-type: none"> Grower satisfaction with growth in cooperation within industry and across industries leading to business and industry innovations (i.e., survey data)
	3. Strengthen industry leadership through initiatives and training	<ul style="list-style-type: none"> Increased participation in industry leadership initiatives
Business insights		
Outcome 4: The Australian pineapple industry is more profitable through informed decision-making using consumer knowledge and tracking, production statistics and forecasting and independent reviews.	1. Increase industry alignment with quality and brand-positioning opportunities driven by consumer insights*	<ul style="list-style-type: none"> Delivery of a consumer insights strategy Evidence that consumer insights inform strategic market engagement (e.g., case studies) New consumer knowledge available for growers
	2. Use production forecasts to inform long-term and/or in-season domestic market planning and supply strategies	<ul style="list-style-type: none"> Production forecast available Evidence that production forecasts support marketing and production decisions

* Foundational investments provide data and information that underpin the delivery of other SIP outcome areas and will be aligned to this strategy. Foundational investment areas include:

- Consumer behavioural data
- Consumer usage and attitudes, and brand health tracking data
- Impact assessments
- Trade data
- Crop protectant data.

Reporting framework

Hort Innovation will use dynamic reporting aligned to the Organisational Evaluation Framework to report regularly on progress and performance. Reporting will be processed through formal channels to inform industry and government investors.

A review of investment performance against the respective industry outcome and/or strategy-level KPIs for the pineapple SIP will be completed annually as the primary reporting mechanism. The SIP performance report will provide:

- Evidence of progress towards achieving the industry-specific outcomes and strategies through an assessment of the KPIs identified in the SIP
- Evidence of progress towards cross-industry investment strategies and outcomes. This will involve Hort Innovation's whole-of-horticulture reporting obligations and corporate plan, annual reports and Hort Innovation's Annual Operating Plan.

SIP performance reports will also inform the Australian Government of progress towards achieving government priorities. In particular, reporting will support Hort Innovation to meet the Performance Principles and requirements contained in the [Deed of Agreement 2020-2030](#).

COLLABORATION AND CROSS-INDUSTRY INVESTMENT

Based on advice from industry throughout the engagement process, Hort Innovation understands that Australian horticulture industries have common issues, and in turn have identified prospective areas for collaboration and cross-industry or regional investment.

These opportunities have been included as strategies across multiple industry SIPs where relevant and required. By delivering more multi-industry collaboration in research, development and extension (RD&E), marketing and international trade, Hort Innovation aims to support more effective and efficient outcomes for growers and the wider horticulture sector. This includes driving investment through the Hort Frontiers strategic partnership initiative. Importantly, while this approach acknowledges there is value in solving issues across industries and regions, it does not reduce the importance of industry-specific initiatives.

Cross-industry/regional R&D opportunities identified for the pineapple industry include:

- Biosecurity preparedness program
- Leadership initiatives.

Cross-industry areas of collaboration for demand-driving outcomes provide the opportunity to advance the prosperity of the sector through gaining efficiencies in the delivery of the program and contributing to stronger overall outcomes. By collaborating as one sector to win the hearts and minds of the consumers, in addition to individual demand-driving programs, there is the potential to enhance the total category value proposition, contributing to driving returns for Australian growers.

Areas of consideration for collaboration for demand-driving outcomes across the lifespan of the pineapple SIP 2022-2026 include:

- All-of-horticulture consumer marketing campaigns designed to drive awareness, consideration, and purchase behaviour change

- Communications to bring horticulture to top of mind (saliency) and reposition the benefits they provide to Australian and international consumers
- Retail partnerships to advance total category and shopper demand-driving programs
- A global brand platform to reinforce the unique selling proposition of Australian-grown horticultural produce and drive preference with international consumers.

Strategic science and research focus

Collaboration across the agriculture research community is essential, including with IRBs and organisations such as the CSIRO, universities, private enterprise and state government agencies. Hort Innovation is a member of the National Horticulture Research Network (NHRN) together with other senior horticultural R&D representatives from state and Australian Government agricultural agencies. The NHRN is responsible for the development and implementation of the broader Horticulture RD&E Strategy under the National Primary Industries RD&E Framework.

During the engagement process, key delivery partners were contacted including lead agencies within the NHRN Framework as well as specific delivery partners for each industry. The lead agency involved with the pineapple industry investment program, Department of Agriculture and Fisheries, Queensland (DAFQ), was engaged during the development of this SIP to ensure consideration and strategically aligned priorities for the pineapple industry. In addition, strategic priorities and opportunities identified by Growcom have been considered in the development of the pineapple SIP where applicable.

TABLE 2. Government and key agency priorities

Growcom priorities	DAFQ priorities	Rural RD&E for Profit priorities	Australian Government Science and Research priorities
Sustainable and efficient farming	Inspire talent, investment and ideas to drive industry development	Advanced technology	Food
Biosecurity and chemical access	Anticipate and respond to the emerging needs of the economy and environment	Biosecurity	Soil and water
Climate risk management and disaster resilience	Support sustainable and responsible industry	Soil, water and managing natural resources	Advanced manufacturing
Workforce development		Adoption of R&D	Environmental change
Innovation and ag-tech			Health
Export readiness			

This SIP has been developed alongside the government and key agency priorities listed in **Table 2**, with consideration of issues faced by the pineapple industry. These strategic areas further emphasise the opportunity and importance of cross-industry and regional collaboration. All the priority areas are of importance to Australian horticulture, and these will play a role in driving the efficiency and effectiveness of investment across the sector.

Annual investment planning

Specific investments to address the SIP strategies and align with industry strategic priorities will be outlined in detail each year via the pineapple AIP. Investment decisions are guided by the SIP and prioritised based on potential industry impact, as well as the availability of levy funds each year. The AIP will be developed with input from the pineapple SIAP, which is made up of growers and other industry representatives as well as IRBs and other key stakeholders. Wherever possible, investments will be aligned to form multi-industry projects to increase the efficiency of funding availability. Details of the SIAP can be found on the Hort Innovation website [here](#), and the AIP will be published on the same page each year.

Investment opportunities through Hort Frontiers

Innovation is key to the future success of Australian horticulture. The next evolution of the long-range, higher risk and transformational R&D that has the potential to make a significant impact will be possible through Hort Innovation's Hort Frontiers strategic partnership initiative.

Hort Frontiers is a strategic partnership initiative that facilitates collaborative, cross-industry investments focused on the longer term and more complex themes identified as critical for Australian horticulture by 2030. The partnership framework is currently being established and will include a number of key investment themes for potential investment to guide the initiative and drive transformational R&D across horticulture. Key investment themes will include:

- Environmental sustainability (water, soil and climate)
- Pollination
- Green cities
- Biosecurity
- Health, nutrition and food safety
- Advanced production systems
- International markets
- Leadership
- Novel food and alternate uses (waste reduction).

The development of these areas for investment will benefit all of horticulture, with support from partners with aligned priorities to co-invest in deliverables identified that require alternative funds available outside the levy. Hort Frontiers is being developed to align with the Australian-grown and to invest in specific impact areas to drive innovation and sustainability initiatives.

The pineapple industry views a number of these investment areas as opportunities for success into the future, including:

- Environmental sustainability (water, soil and climate)
- Biosecurity
- Health, nutrition and food safety
- Leadership.

Partnering with Hort Frontiers on these areas would provide the pineapple industry with opportunities for access to world-class research, specialised project management teams and large-scale R&D.

Australian-grown Horticulture Sustainability Framework

Hort Innovation has developed the Australian-grown Horticulture Sustainability Framework, aiming to strengthen the horticulture industry's sustainability to meet the changing expectations and needs of growers, consumers, the community, investors and governments. The framework applies across the whole of Australian horticulture, including fruits, vegetables, nuts, nursery stock and turf. Through widespread consultation with industry and external groups, proposed sustainability goals and indicators were identified and are detailed within the framework. The framework is aligned to the UN Sustainable Development Goals.

Four key pillars were identified in the framework (*Figure 1*).

FIGURE 1. Four key pillars of the Australian-grown Horticulture Sustainability Framework



The framework should be cross-referenced when undertaking prioritisation of investments. At the time of publication, Hort Innovation is working with industry groups regarding the overall responsibility for the framework, setting and reporting progress against the framework targets and performance measures.

View the Australian-grown Horticulture Sustainability Framework on the Hort Innovation website [here](#).

Table 3 provides examples of pineapple SIP strategies showing how the industry is already aligning to the framework.

TABLE 3. Pineapple SIP strategy examples showing how the industry is already aligning to the Australian-grown Horticulture Sustainability Framework

Strategy	Potential benefit or impact	Sustainability goal
Grow industry leadership through initiatives and training	<ul style="list-style-type: none"> • Increase in business and industry innovations due to development of trusted relationships 	People & Enterprise
Increase domestic consumer demand for fresh, quality Australian pineapples through knowledge, attitudes and purchase intent	<ul style="list-style-type: none"> • Increased consumer demand for Australian pineapples 	Nourish & Nurture
Improve industry preparedness and resilience to biosecurity threats	<ul style="list-style-type: none"> • Improved industry biosecurity preparedness reducing the impact of incursions 	Planet & Resources
Deliver extension and communication capability to support positive change in the areas of sustainability, fruit quality, biosecurity and adoption of new varieties	<ul style="list-style-type: none"> • A progression in KASA and practice change for grower/industry profitability and sustainability through use of BMPs and innovation 	People & Enterprise



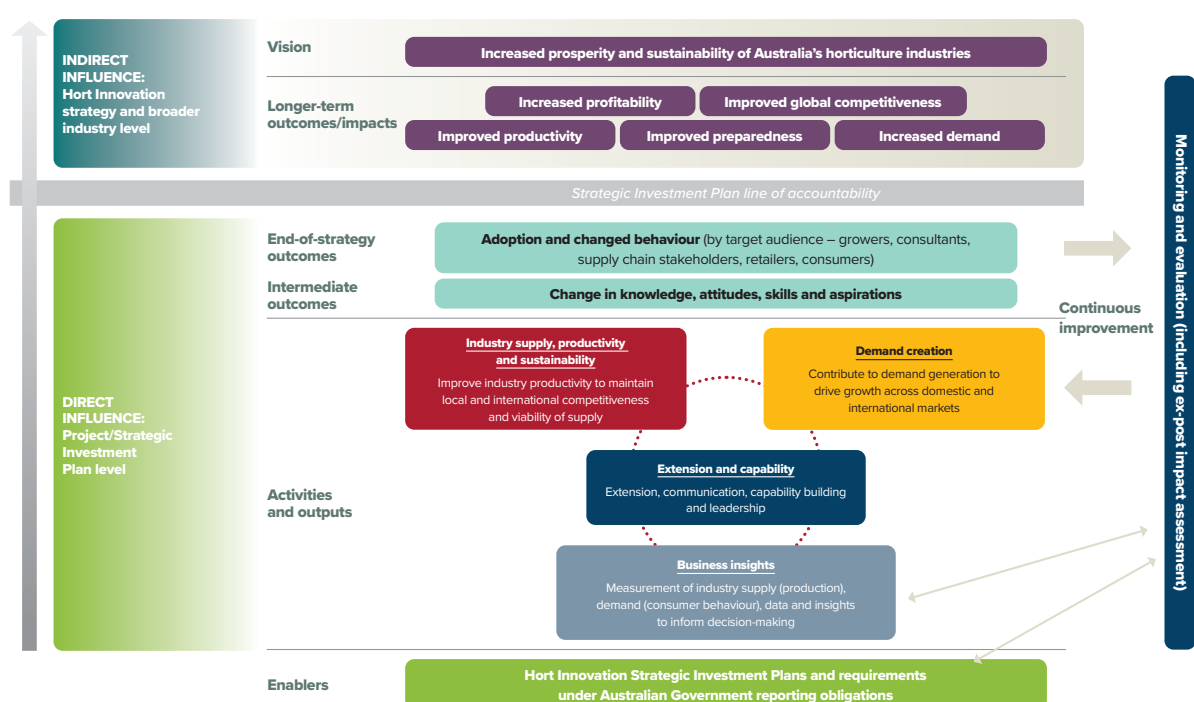
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Strategic Investment Plan logic

The SIP logic (**Figure 2**) identifies how investment activities and outputs (delivered through each SIP outcome area) will support changes in industry KASA, which drive adoption and behaviour change. Beyond the SIP, investment will contribute to driving longer-term impacts for the sector like increased preparedness, demand, productivity, global competitiveness and profitability. Realising these impacts will support Hort Innovation’s vision of increased prosperity and sustainability of Australia’s horticulture industries.

FIGURE 2. Strategic Investment Plan logic



Aligning to Hort Innovation investment priorities

Hort Innovation is committed to sustainable growth in horticulture, with the overarching aim of increasing the sector’s value to \$20 billion by 2030. We will do this through implementing the SIP and investments against the three core pillars, committed to:

1. Drive knowledge and innovation into horticulture industries
2. Deliver the highest value R&D, marketing and international trade investments across industries now and into the future
3. Enable activities that drive all strategic imperatives.

Hort Innovation is governed by a Deed of Agreement with the Australian Government, which allows for the transfer

and investment of levies and Australian Government contributions. As an RDC, Hort Innovation is able to leverage industry levy investments in RD&E with Australian Government contributions up to a value of 0.5% of the industry’s gross value of production. All investments made by Hort Innovation are thoroughly considered to ensure they contribute to the guiding performance principles:

- Productivity
- Profitability
- Preparedness for future opportunities and challenges
- Competitiveness
- Demand: demonstrates how productivity, preparedness and demand lead to profitability and competitiveness and sustainability.

APPENDICES



APPENDIX 1: Industry context

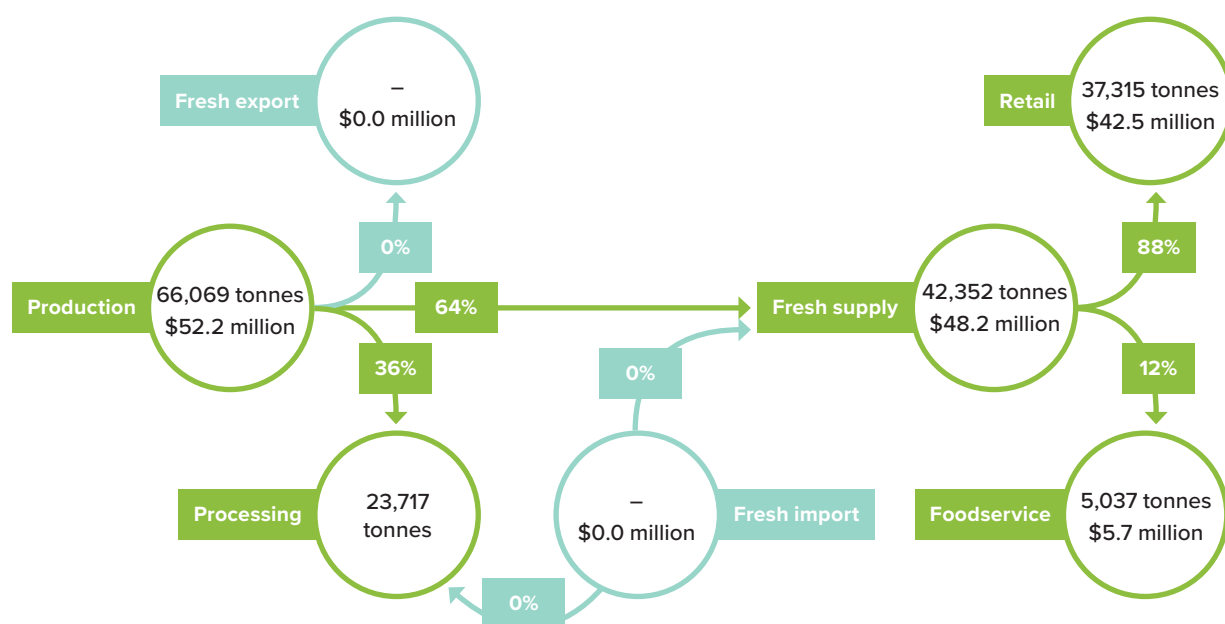
Industry supply chain

The pineapple industry has moved from one where most of the fruit was grown for processing to one that is moving towards fresh supply due to the increased competition from cheaper imports of processed fruit. Processing, however, still constitutes 36% of production, significantly larger than most horticulture products, and has remained stable over the past five years.

Whilst Queensland remains the largest production region, the Northern Territory has increased production. Exact numbers are unknown, but production is expected to continue this trend.

The pineapple industry is relatively unique, with one-third of industry production sent for processing, and no exports or imports. The remaining two-thirds of production is sent to the domestic market, with 13% of this sent to foodservice and the remainder to retail (**Figure 3**).

FIGURE 3. Pineapple value chain, 2019/20



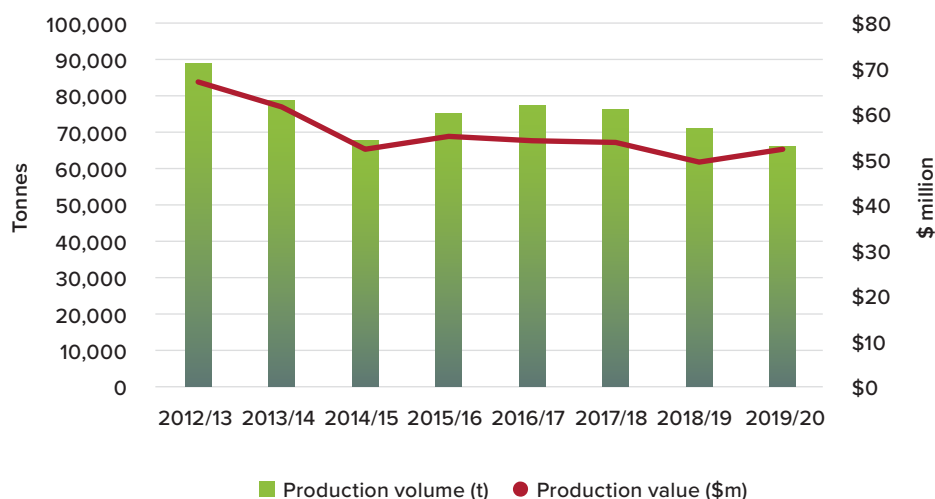
Source: Australian Horticulture Statistics Handbook (2019/20)

Domestic demand drivers

Although pineapples are available year-round, the consumer perceives them to be a summer fruit and the majority of fresh product is purchased through an impulse buy. Issues of oversupply and poor quality can impact the market at different times of year dependent on weather conditions, heat and flowering events. With the long growth cycle, methods to control flowering would help smooth supply volatility while developing a non-invasive quality test would provide the certainty required to maximise return.

The main barrier to consumption is the effort required to prepare the fresh fruit and the perception that there is a lot of waste when removing the skin.

Industry production

FIGURE 4. Pineapple production, 2012/13 to 2019/20

Source: Australian Horticulture Statistics Handbook 2019/20

Pineapple production has reduced over the past eight years, declining from a volume of 88,408 tonnes in 2012/13 to 66,069 tonnes in 2019/20. Unit price over this time has remained stable at around \$0.79 per kilogram, which represents a reduction in real prices when considering inflation. There is evidence, however, that this is improving with unit price increasing from \$0.70 per kilogram in 2018/19 to \$0.79 in kilogram in 2019/20 (Figure 4).

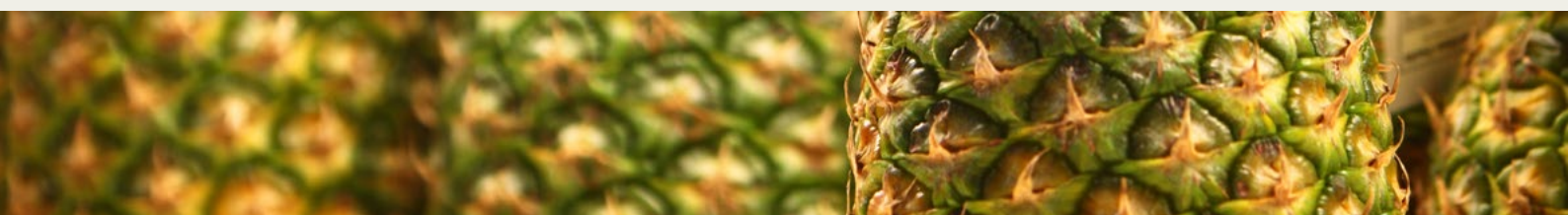
One key investment area is breeding, which is aiming to cause a steep increase in industry productivity. The Hort Innovation project *National pineapple breeding and evaluation program* (PI17000) is focused on developing high-yielding varieties with improved disease resistance and flowering control, as well as improved fruit consistency and quality.

Another area of opportunity is crop protection through an integrated approach to pest management. This includes various crop protection strategies including cultural, biological and chemical. The project *Pineapple integrated crop protection program* (PI17001) is an example of the industry investing in this area, and aims to help industry achieve higher yields with lower production costs through integrated pest management methods.

TABLE 4. Fresh pineapple seasonality by state

STATE	19/20 TONNES	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
Queensland	65,408												
Northern Territory	661												
Availability legend			High			Medium			Low				None

Source: Australian Horticulture Statistics Handbook (2019/20)



APPENDIX 2: Pineapple industry situation analysis

At the time of refreshing the SIP in 2021, the global coronavirus (COVID-19) pandemic continues to affect horticulture industries to varying degrees. The outcome and ultimate impact of the pandemic are unknown. Investment areas that may be influenced over the period of this SIP include export and trade relationships, domestic and international demand, logistics and supply chain, labour supply – all have potential impacts on grower profitability.

Environmental, economic and social sustainability are vitally important to Australian horticultural growers and industries. Customers, consumers, and investors also seek information about the sustainability and ethics of how their food is produced. Sustainability is particularly crucial as topics such as climate variability, health and ethics continue to shape the social, environmental, and political landscape for agricultural industries. The impact of these issues may have influence on a whole range of investment areas for horticulture from production practices and land management, demand and reputation of products, quality expectations and cultural/community engagement.

Strengths, weaknesses, opportunities and threats

Table 5 has been used to analyse the pineapple industry’s strengths, weaknesses, opportunities, and threats (SWOT). The SWOT tool assists the industry to build on what works, observe what is lacking, minimise risks, and take the greatest possible advantage of chances for success.

TABLE 5. Pineapple SWOT analysis

The pineapple industry	
Strengths	<ul style="list-style-type: none">• Quality fresh product• Good representative support from Growcom and the Queensland Government• Coordinated efforts between growers and packing organisations• Strong information channels within the industry through The Pineapple Press, Growcom and Hort Innovation. The Australian Pineapples website is useful but needs updating (an update was due in 2017)• Grower co-ordination and co-operation and information sharing networks between growers• Australia is seen as a benchmark producer regarding yield and growing practices
Weaknesses	<ul style="list-style-type: none">• Processing industry dominated by a single enterprise• Reducing grower numbers reduces the capacity of the industry to expand• Variable supply due to seasonal conditions coupled with outdoor growing conditions, with peaks impacting prices• Loss of experience within the industry with the retirement or loss of experienced agronomists• Lack of a reliable quality measure that is non-invasive• High cost of capital required to enter the industry• Lack of data and information regarding consumer usage and attitudes• Hard to prepare for consumption compared to other fruits



The pineapple industry	
Opportunities	<ul style="list-style-type: none">• Greater mechanisation may help reduce dependence on labour• Increasing consumer health consciousness and ‘wellness’ campaigns• Improve industry understanding of the potential for automation• Varietal improvement including disease resistance and natural flowering• Broader adoption of BMP approaches and the development and adoption of integrated pest and disease management (IPDM) practices to reduce the dependence on crop protectants• All year supply and fresh fruit availability• Address consumer barrier to consumption through education on preparation
Threats	<ul style="list-style-type: none">• Labour cost increases• Biosecurity incursion from tropical pests and diseases• Urban encroachment• Regulatory changes removing the availability of specific farm management controls• Increasing production costs including water, electricity and transport• Climate variability

“Processing constitutes 36% of production, significantly larger than most horticulture products, and has remained stable over the past five years.”



APPENDIX 3: People consulted

The following people are acknowledged for their contribution to the pineapple SIP development process.

NAME	INDUSTRY ROLE	REGION
Adam Payne	Grower	Wide Bay
Beau Black	Grower	Central Queensland
Beau Oakes	Oakes and Sons	South East Queensland
Ben Clifton	Valley Syndicate	Central Queensland
Bernadetta Maywald	Maywald Pines	Wide Bay
Chelsea Berra	Berra and Sons	North Queensland
Damien Berra	Berra and Sons	North Queensland
Jake Brookes	Brookes and Sons	Central Queensland
Jeff Atkinson	Wide Bay Pines	Wide Bay
John Cranny	Valley Syndicate	Central Queensland
John Steemson	Littabella Pines	Wide Bay
Linda Steemson	Littabella Pines	Wide Bay
Murray Oakes	Oakes and Sons	South East Queensland
Nathan Stevens	Lake Mary Pines	Central Queensland
Peter Maywald	Maywald Pines	Wide Bay
Peter Sherriff	Sherpine	Central Queensland
Rian Pace	Pace Farming	North Queensland
Ryan Bookes	Brookes and Sons	Central Queensland
Stephen Pace	Pace Farming	North Queensland
Steven Black	Grower	Central Queensland
Gavin Scurr	Pinata Farms	Queensland

APPENDIX 4: Reference material

Australian Pineapples, 2021, <https://australianpineapples.com.au/>

Carr, B. & Newett, S., 2020, Pineapple Integrated Crop Protection Program (PI17001, MS106), Queensland Department of Agriculture and Fisheries, Agri Supply Global and Growcom, Table 6

Horticulture Innovation Australia Limited, 2012, Pineapple Strategic Investment Plan 2012-17

Horticulture Innovation Australia Limited, 2019, Growing into the Future: Strategy 2019-2023

Horticulture Innovation Australia Limited, 2020, Australian Horticulture Statistics Handbook 2019/20

Horticulture Innovation Australia Limited, 2021, Australian-grown Horticulture Sustainability Framework

APPENDIX 5: List of acronyms

AIP	Annual Investment Plan
APVMA	Australian Pesticides and Veterinary Medicines Authority
BMP	best management practice
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DAFQ	Department of Agriculture and Fisheries, Queensland
FY	financial year
IPDM	integrated pest and disease management
IRB	Industry Representative Body
KASA	knowledge, attitudes, skills and aspirations
KPI	key performance indicator
M&E	monitoring and evaluation
MRL	Maximum Residue Limit
NHRN	National Horticulture Research Network
R&D	research and development
RDC	Research and Development Corporation
RD&E	research, development and extension
SARP	Strategic Agrichemical Review Process
SIAP	Strategic Investment Advisory Panel
SIP	Strategic Investment Plan
SWOT	strengths, weaknesses, opportunities, and threats



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