

Nursery

Strategic Investment Plan

2022-2026



CONTENTS

Executive summary	3
The nursery Strategic Investment Plan	5
Financial estimates	6
SECTION ONE: Nursery industry outcomes	7
Industry outcomes	7
SECTION TWO: Nursery industry strategies	9
Strategies to address industry investment priorities	9
SECTION THREE: Nursery SIP monitoring and evaluation	12
Nursery SIP Monitoring and Evaluation Framework	12
Reporting framework	15
SECTION FOUR: Collaboration and cross-industry investment	16
Strategic science and research focus	16
Annual investment planning	17
Investment opportunities through Hort Frontiers	17
Australian-grown Horticulture Sustainability Framework	18
SECTION FIVE: Hort Innovation	20
Strategic Investment Plan logic	20
Aligning to the Hort Innovation investment priorities	20
SECTION SIX: Appendices	21
APPENDIX 1: Industry context	21
APPENDIX 2: Nursery industry situation analysis	24
APPENDIX 3: People consulted	28
APPENDIX 4: Reference material	29
APPENDIX 5: List of acronyms	29

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EXECUTIVE SUMMARY

The overarching strategic intent of this Strategic Investment Plan (SIP) is to optimise the profitability and sustainability of the Australian nursery industry through improved biosecurity preparedness, and increasing demand based on improved sustainability credentials and the health and environmental benefits of greenlife products.

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

The Australian nursery industry situation in 2019/20 is described on **page 4** with further information provided in **Appendix 1**. The nursery industry grows plants for Australians to enjoy, aiming to sustainably and economically impact people's lives, communities and our planet. The industry is in a growth stage, with a production value in excess of \$2.5 billion in 2019/20. Domestic market sales account for over 99% of Australian nursery production with retail nurseries (41%) the dominant sector of the market. It is anticipated that the industry will continue to grow over the next five years with the renewed consumer interest in plants and landscaping experienced during the COVID-19 pandemic continuing. Maintaining this demand and capitalising on other growth opportunities is a feature of this SIP.

The strategic intent of the nursery SIP provides a summary of how the industry will change over the next five years. The key focus is on optimising profitability and sustainability through improvements to production efficiencies, biosecurity resilience and the development of a sustainability program. This, together with increases in demand creation through an effective marketing program, will underpin the success of the nursery SIP. Collaboration with other greenlife industry participants

such as landscapers, building developers, local governments as well as other industries (e.g., turf) will enhance the industry's success over the next five years.

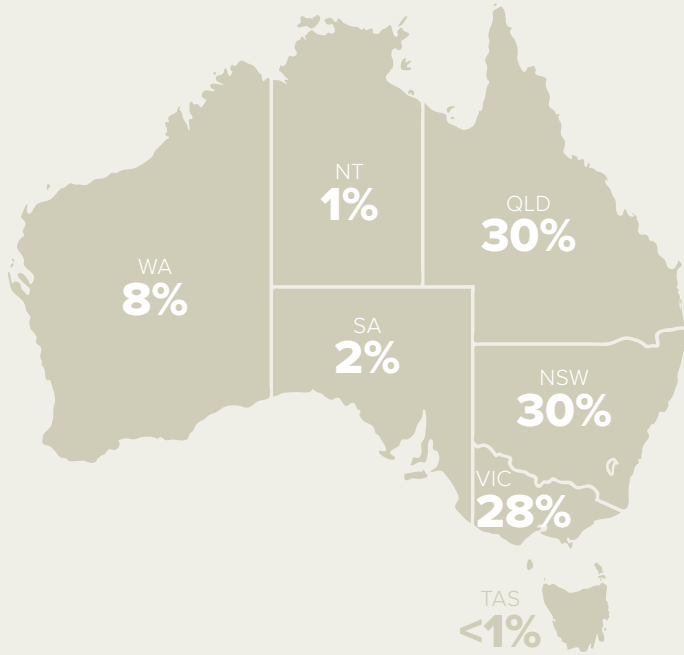
The financial estimates give an indicative overview of the funding availability for the period of FY2022-FY2026. Whilst a major portion of the available investment funds are currently allocated to key projects such as the biosecurity, pest identification and communications programs, there are still opportunities over the life of the SIP to invest in other key priority areas.

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 nursery industry with improvements in sustainability – including climate change, waste management, recycling, water, environmental and energy use efficiency – an industry priority. This together with increasing demand for Australian nursery products, especially the development of a new broader 'single brand' marketing program will be fundamental drivers of this SIP.

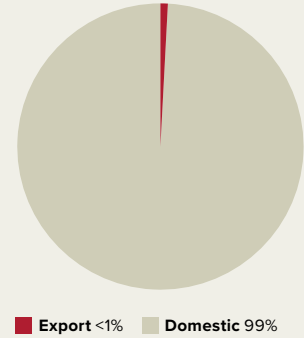
The key performance indicators (KPIs) detail how the impact of each strategy will be measured, for example, the development of a nursery industry sustainability program, increased industry uptake of biosecurity preparedness procedures and programs, and the positive influence on consumer preference for nursery products will ensure the strategic intent of the nursery SIP is achieved.



PRODUCTION REGIONS:



EXPORT/DOMESTIC:



GROWTH TRENDS:



PRODUCTION WINDOW:



VALUE OF PRODUCTION:



NUMBER OF GROWERS:



PRODUCT CATEGORIES:

**Propagation plants;
Herbs and vegetables;
Fruit trees, nuts and vines;
Bedding and potted colour;
Indoor plants;
and
Perennials, trees and shrubs**

THE NURSERY STRATEGIC INVESTMENT PLAN

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

Hort Innovation has led the process for preparing the refresh of the nursery 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 and input from a wide range of levy payers, objective analysis of performance and learnings from the previous SIP, as well as reviews to identify emergent trends and issues that could impact on industry profitability and sustainability.

Hort Innovation has valued the support, advice, time, and commitment of all stakeholders that contributed to producing this SIP, especially nursery 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 nursery 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 nursery 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 nursery Strategic Investment Advisory Panel (SIAP), IRBs and other key stakeholders.

Producers in the nursery 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 research and development (R&D), marketing, biosecurity and residue testing programs.

Levy is payable on nursery potted plants that are produced in Australia and either sold by the producer or used by the producer in the production of other goods. The levies are based on the sale price or landed cost of the container, with the levy rate set at 2.75% for R&D and 2% for marketing.

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

This SIP represents the Australian nursery industry's collective view of its research, development and extension (RD&E) and marketing needs over the next five years (2022-2026). Learning, achievements and analysis of the previous SIP, consultation with Australian nursery 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 nursery SIP. Importantly, a portion of these funds is already committed, as the industry has current multi-year projects for R&D, extension and marketing activities. In addition, the levy income from year to year will vary due to changes in seasonal and market conditions.

The indicative financial estimates used for the purposes of developing this SIP are presented in **Table 1** below. These figures are regularly reviewed to reflect the latest information and statistics for the industry and any changes in investment priority. For further details refer to the nursery AIP.

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

	2022 \$	2023 \$	2024 \$	2025 \$	2026 \$
R&D					
Balance end FY2021	296,185				
Estimated levy funds (growers)	1,800,000	1,890,000	1,980,000	2,000,000	2,100,000
Australian Government contribution	1,626,450	1,409,513	1,322,506	1,102,088	1,131,090
Current investments	2,354,000	1,880,000	1,680,000	1,200,000	1,250,000
New investments	450,000	550,000	600,000	700,000	700,000
Total project investments	2,804,000	2,430,000	2,280,000	1,900,000	1,950,000
CCR	448,900	389,026	365,012	304,176	312,181
Projected end balance	440,000	900,000	1,300,000	2,300,000	3,000,000
MARKETING					
Balance end FY2021	397,207				
Estimated levy funds (growers)	1,400,000	1,450,000	1,520,000	1,590,000	1,650,000
Current investments	810,000	–	–	–	–
New investments	–	755,000	805,000	805,000	805,000
Total project investments	810,000	755,000	805,000	805,000	805,000
CCR	167,081	155,736	166,049	166,049	166,049
Projected end balance	814,000	1,352,000	1,500,000	1,600,000	1,700,000

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

NURSERY INDUSTRY OUTCOMES



The overarching strategic intent of this SIP is to optimise the profitability and sustainability of the Australian nursery industry through improved biosecurity preparedness and increasing demand, based on improved sustainability credentials and the health and environmental benefits of greenlife products.

Industry outcomes

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

OUTCOME 1: Demand creation

Contribute to increasing 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 value 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 greenlife products are top of mind and purchased more frequently
- Support product positioning with consistent product quality and socially responsible industry production practices
- Develop strong relationships within the industry and across the supply chain with a shared goal to grow the category
- Raise awareness of opportunities and pathways for businesses to be involved in meeting demand in the domestic market
- Drive efficiencies in marketing effectiveness via *Greener Spaces Better Places* or similar programs
- Promote the sustainability credentials and benefits of greenlife products
- Promote the environmental and health benefits of increased garden space and public landscape plantings.



OUTCOME 2: Industry supply, productivity and sustainability

Improve industry productivity (inputs/outputs) to maintain competitiveness and 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 improve the uptake of production practices that optimise productivity and reduce risk to growers while maintaining profitability. Achieving the outcome will involve:

- Developing a sustainability program that addresses the industry's opportunities and challenges in the areas of climate change, waste management and recycling, water, energy, and environmental management
- Developing and implementing best management practice (BMP) modules to raise professionalism within the industry and enhance the return on investment for businesses and the industry's levy investments
- Improving industry biosecurity preparedness and resilience including prevention, protection and recovery from exotic and endemic plant pest incursions and responses
- Improving access to new varieties (both local and overseas) with effective and efficient port of entry systems.

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 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:

- Increasing KASA and practice change for grower and industry profitability and sustainability through adoption of R&D that leads to practice change 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
- Improving networks and cross-industry collaboration to increase on-farm use of R&D outputs 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 remain aware 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; 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, knowledge and tracking, production statistics, benchmarking, and independent reviews to enable better decision-making process at the industry level and for individual businesses.

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



NURSERY 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 the resources to do so. Further resources and efficiencies may potentially become available through alternative funding sources by way of Hort Frontiers strategic partnership initiative, external grants and/or cross-industry initiatives.

OUTCOME 1: Demand creation

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

STRATEGIES	POTENTIAL BENEFIT OR IMPACT
1. Increase domestic consumer demand for quality Australian greenlife products through improving knowledge, attitudes and purchase intent	<ul style="list-style-type: none"> Increased consumer demand for Australian greenlife products Strengthened industry reputation with consumers
2. Promote the nursery industry's sustainability credentials to enhance the industry's reputation	

OUTCOME 2: Industry supply, productivity and sustainability

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

STRATEGIES	POTENTIAL BENEFIT OR IMPACT
1. Develop an industry sustainability program that provides a basis for improvements in, and evidence of, the industry's continued BMPs in areas such as climate change, waste management and recycling, water, energy, and environmental management	<ul style="list-style-type: none"> Increased industry sustainability Trusted sustainability credentials for the nursery industry Awareness of what the industry is doing and achieving towards environmental sustainability
2. Improve industry biosecurity preparedness and resilience, including prevention, protection and recovery from exotic and endemic plant pest incursions and responses	<ul style="list-style-type: none"> Reduced costs (direct and indirect) to industry through better preparedness, prevention and early response to plant pest incursions Improved market access to enable rapid restoration and business continuity after incursions
3. Improve access to interstate and international nursery products through the national adoption of a creditable biosecurity system	<ul style="list-style-type: none"> A structured plant protection and biosecurity system reducing pest management costs and impacts Government/industry partnership sharing the biosecurity responsibility and improving outcomes along the biosecurity continuum
4. Improve access to new germplasm from local and overseas sources	<ul style="list-style-type: none"> Faster access to new varieties, reduced post-entry quarantine costs, appropriate port of entry systems

Continued >>

OUTCOME 2: Industry supply, productivity and sustainability

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

STRATEGIES	POTENTIAL BENEFIT OR IMPACT
5. Monitor overseas innovation and trends, especially new technology or production systems that reduce the reliance on skilled labour	<ul style="list-style-type: none"> Uptake of new technologies and production systems to improve labour efficiencies
6. Review and update the industry's BMPs and expand participation in these programs, including accreditation	<ul style="list-style-type: none"> Increase in number of growers utilising BMPs, leading to improved sustainability, productivity and profitability
7. Improve water-use efficiency and production techniques to maximise water quality and availability	<ul style="list-style-type: none"> Reduced costs and improved sustainability credentials
8. Develop and optimise fit-for-purpose integrated pest and disease management (IPDM) strategies for growers	<ul style="list-style-type: none"> Long-term sustainable best practises
9. 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
10. Provide regulatory support and co-ordination 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 have informed proactive strategic priority setting to avoid pest management gaps in the event access or use is negatively impacted
11. 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 meet industry priority needs as identified in the industry SARP or biosecurity plan



“The important function of the SIP is to ensure that investment decisions align with nursery industry priorities.”

OUTCOME 3: Extension and capability

Improved capability and an innovative culture in the Australian nursery industry maximises investments in productivity and demand.

STRATEGIES	POTENTIAL BENEFIT OR IMPACT
1. Deliver communication and extension programs that support positive change in the areas of demand creation, sustainability (e.g., waste and energy management), biosecurity, and best practice pest and disease management	<ul style="list-style-type: none"> • A change/progression in awareness, knowledge and skills for grower/industry profitability and sustainability which supports the adoption of best practice and innovations • Improved industry understanding of biosecurity and sustainability, including practices such as good hygiene to improve productivity and sales through producing environmentally sustainable, healthy plants
2. Provide opportunity for required levels of engagement between industry, across industry members and with relevant stakeholders to innovate through trusted relationships	<ul style="list-style-type: none"> • Improved engagement will contribute to a stronger, more resilient industry. In addition, improved networks and cross-industry collaboration will increase efficiencies and the use of R&D outputs to build a stronger, more resilient industry
3. Strengthen industry skills and leadership through targeted skills training, leadership development and a career pathway program for the nursery industry	<ul style="list-style-type: none"> • Proactive strategic and evidence-based decision-making in businesses and for industry on investment, priorities and risk management • Recognition of the industry as a respected as a professional career choice with future labour availability • Availability of skilled staff for the nursery industry

OUTCOME 4: Business insights

The Australian nursery industry is more profitable through informed decision-making using consumer knowledge and tracking, independent reviews, production statistics, benchmarking 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"> • Provision of business insights deliver against demand, supply and extension outcomes
2. Use industry production benchmarking activity to measure and track industry productivity and profitability	<ul style="list-style-type: none"> • Improved data on cost of production across enterprises of different scales • Opportunities for cost reduction
3. Use industry production and market segmentation statistics to inform long-term and/or in-season market planning and supply strategies	<ul style="list-style-type: none"> • Increased industry capacity

* 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.



NURSERY SIP MONITORING AND EVALUATION

The nursery 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 SIPs to ensure they remain relevant to industry.

Nursery SIP Monitoring and Evaluation Framework

The nursery 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 nursery industry to develop existing and future domestic markets.	1. Increase domestic consumer demand for quality Australian greenlife products through improving knowledge, attitudes and purchase intent	<ul style="list-style-type: none"> • Positive influence on consumer preference • Use of the wellbeing benefits of greenlife products • Positive shifts in brand tracking
	2. Promote the nursery industry’s sustainability credentials to enhance the industry’s reputation	<ul style="list-style-type: none"> • Positive influence on consumer preference • Positive shifts in brand tracking



OUTCOME	STRATEGIES	KPIs
Industry supply, productivity and sustainability		
<p>Outcome 2: The Australian nursery industry has increased profitability, efficiency and sustainability through innovative R&D, biosecurity and sustainable BMPs.</p>	<ol style="list-style-type: none"> 1. Develop an industry sustainability program that provides a basis for improvements in, and evidence of, the industry's continued BMPs in areas such as climate change, waste management and recycling, water, energy, and environmental management 2. Improve industry biosecurity preparedness and resilience, including prevention, protection and recovery from exotic and endemic plant pest incursions and responses 3. Improve access to interstate and international nursery products through the national adoption of a credible biosecurity system 4. Improve access to new germplasm from local and overseas sources 5. Monitor overseas innovation and trends, especially new technology or production systems that reduce the reliance on skilled labour 6. Review and update the industry's BMPs and expand participation in these programs, including accreditation 7. Improve water-use efficiency and production techniques to maximise water quality and availability 8. Develop and optimise fit-for-purpose integrated pest and disease management (IPDM) strategies for growers 9. Prioritise the major crop protection gaps through a SARP* 10. Provide regulatory support and co-ordination for crop protection regulatory activities with the potential to impact plant protection product access, both in Australia and internationally* 11. 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"> • Development of a nursery industry sustainability program as part of a broader horticulture sustainability program • Adoption of nursery industry sustainability program • Maintenance/tracking of the implementation of an industry biosecurity plan • Improved biosecurity preparedness • Development of risk analyses of high priority pests including entry pathways, establishment and spread potential • Increased industry acceptance and uptake of suitable biosecurity programs and systems • Identification of barriers to importation of new plant genetics and investigation of third-party certification programs and port-of-entry efficiencies and service standards • Improved ease of access of new germplasm • Review of new nursery industry innovations and trends that can be implemented by Australian nursery growers • Updated BMPs • Increasing participation in the BMPs • New knowledge of best practice water management in nursery production systems • Adoption of production techniques improving water-use efficiency, quality and availability. • Development of fit-for-purpose IPDM system • Adoption of IPDM system leading to on-ground practice change • 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 • Regulatory Risk Assessments maintained • 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 nursery industry maximises investments in productivity and demand.	1. Deliver communication and extension programs that support positive change in the areas of demand creation, sustainability (e.g., waste and energy management), biosecurity, and best practice pest and disease management	<ul style="list-style-type: none"> Establishment of a baseline and then increased share of industry (hectares) with positive change in KASA concerning targeted high priority areas
	2. Provide opportunity for required levels of engagement between industry, across industry members and with relevant stakeholders to innovate through trusted relationships	<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 skills and leadership through targeted skills training, leadership development and career pathway program for the nursery industry	<ul style="list-style-type: none"> Increased participation in industry leadership initiatives Increased availability of suitable staff for industry members
Business insights		
Outcome 4: The Australian nursery industry is more profitable through informed decision-making using consumer knowledge and tracking, production statistics, forecasting, benchmarking 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 consumer insights strategy Evidence that consumer insights inform strategic market engagement (e.g., case studies) New consumer knowledge available for growers
	2. Use industry production benchmarking activity to measure and track industry productivity and profitability	<ul style="list-style-type: none"> Availability and evidence of data used to support industry-level decision-making and grower practice change
	3. Use industry production and market segmentation statistics to inform long-term and/or in-season market planning and supply strategies	<ul style="list-style-type: none"> Availability and evidence that production data supports 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 nursery 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. It will involve Hort Innovation's whole-of-horticulture reporting obligations and corporate plan and involve 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](#).

The nursery SIP is the roadmap that will guide Hort Innovation's oversight and management of the nursery industry's investment programs.



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 targeted multi-industry collaboration in 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 nursery industry include:

- Green cities, gardening, sustainability, urban horticulture and landscaping initiatives
- Biosecurity and crisis management
- Leadership and training for the next generation of producers/leaders
- International greenlife R&D 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 nursery SIP 2022-2026 include:

- Communications to bring horticulture to top of mind (saliency) and reposition the benefits they provide to Australian consumers
- Retail partnerships to maintain total category and shopper demand (currently very high).

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. Strategic priorities and opportunities identified by various state and national bodies have been considered in the development of the nursery SIP where applicable.

The key outcomes and strategies held within this SIP are also in alignment with the Greenlife Industry Australia (GIA) Strategic Plan (2020-2023) which includes both overall industry strategies and key RD&E investment strategies.



TABLE 2. Government and key agency priorities

GIA priorities	Rural RD&E for Profit priorities	Australian Government Science and Research priorities
Leadership	Advanced technology	Food
Collaboration	Biosecurity	Soil and water
Advocacy	Soil, water and managing natural resources	Advanced manufacturing
Education	Adoption of R&D	Environmental change
Market development		Health
Biosecurity		

This SIP has been developed alongside the government and key agency priorities listed in **Table 2**, with consideration of issues faced by the nursery 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 nursery 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 nursery 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.

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 Horticulture Sustainability Framework to invest in specific impact areas to drive innovation and sustainability initiatives.

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

- Green cities
- Biosecurity
- Leadership.

Partnering with Hort Frontiers on these areas would provide the nursery 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 an example of a nursery SIP strategy that illustrates how the industry is already aligning to the framework.

TABLE 3. A nursery SIP strategy example showing how the industry is already aligning to the Australian-grown Horticulture Sustainability Framework

STRATEGY	IMPACT	SUSTAINABILITY GOAL
Develop an industry sustainability program that provides a basis for improvements in and evidence of the industry’s continued BMPs in areas such as climate change, waste management and recycling, water, energy, and environmental management	<ul style="list-style-type: none"> • Increased industry sustainability • Trusted sustainability credentials for the nursery industry • Awareness of what the industry is doing and achieving towards environmental sustainability 	Planet & Resources



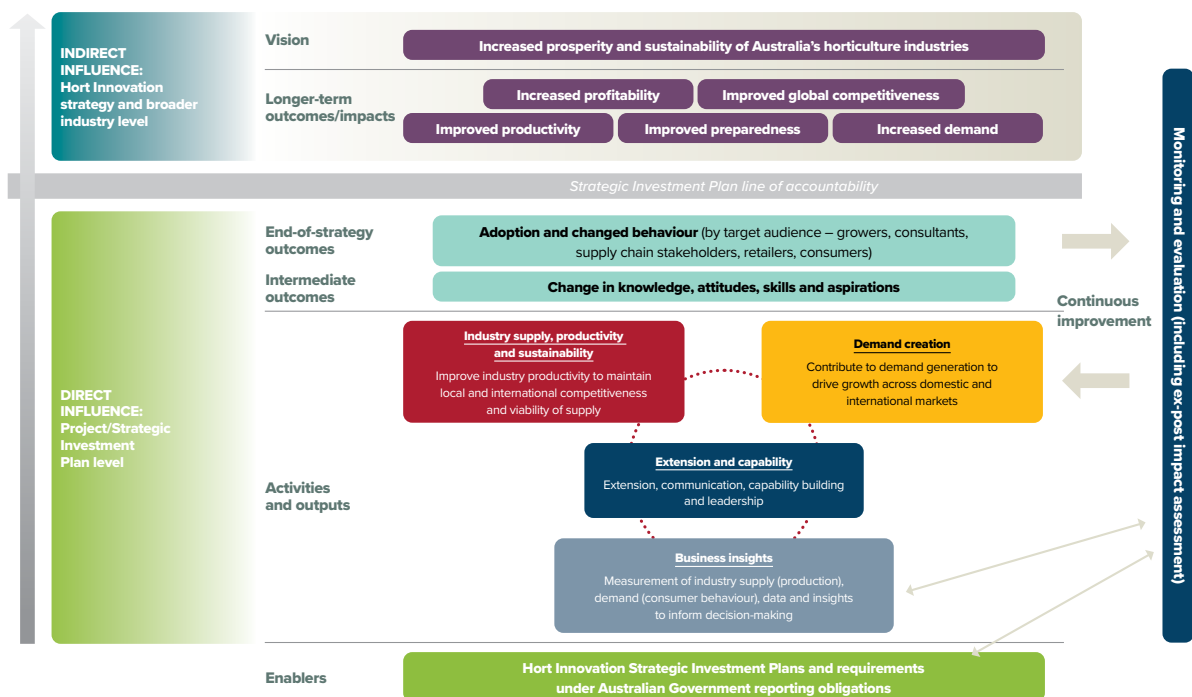
HORT INNOVATION



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 a Research and Development Corporation (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 domestic market consumes over 99% of Australian nursery production. Therefore, industry growth is dependent on creating greater demand and value for nursery products in Australia. Large retailers, landscapers, developers, primary industries and local governments are major market segments.

Retail (independent and 'big box') represents the largest sales channel (41% of the value all production sales or approximately \$1.37 billion), but wholesale nurseries (22% of the value of all sales), landscape (14%) and primary industry (9%) represent significant value, and sales have trended upwards over the past three years.

Consistent with growth in the overall retail channel, the value of sales to large 'big box' retailers has trended upwards since 2017/18. In total, these sales represent 52% of the retail channel, worth an estimated \$710 million in 2019/20, up 7% compared to the previous financial year.

Greater demand for greenlife through 2019/20 has resulted in a significant increase in the proportion of stakeholders confident in the industry's future (now 90%, the highest result since the Nursery Industry Statistics survey's inception in 2017).

Currently, four in 10 businesses are expanding and less than one in 20 are contracting or winding down. There is some evidence suggesting that the industry will continue to grow over the next five years, with half of all respondents, including six in 10 large businesses expecting to grow.

Extrapolated data suggests that nursery production businesses employ between 23,000 and 25,000 employees at an estimated full-time equivalent (FTE) of between 18,500 and 20,500 employees.

Domestic consumers and drivers of demand

The nursery industry has a large but diverse consumer base. Retail (independent and 'big box') represents the largest sales channel (41% of the value of all production sales or approximately \$1.37 billion), but wholesale nurseries (22% of the value of all sales), landscape (14%) and primary industry (9%) represent significant value and sales to each have trended upwards over the past three years.

The industry has invested heavily in maintaining and growing demand in the household and government consumer channels. For the government channel, Hort Innovation projects include:

- *202020 Visions: living network* (NY16501)
- *202020 Vision: Training and capacity building program* (NY15008)
- *Where should all the trees go?* (NY16005)
- *202020 Vision: Five-stop national tour* (NY18007).

For the consumer channel, Hort Innovation projects have included:

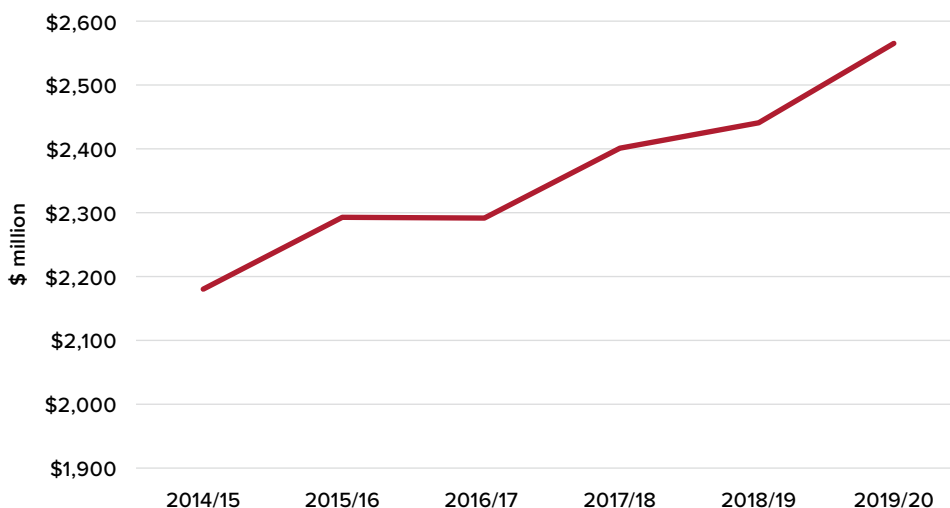
- *Plant Life Balance – Bunnings activation* (NY17518)
- *Healthy Homes index* (NY16008).

There have also been projects targeting specific sectors such as the Hort Innovation project *Integrating plant life into building and infrastructure and rating tools* (NY16007) whose audience is the infrastructure and property sectors.



Industry production

FIGURE 3. Nursery production, 2014/15 to 2019/20



Source: Australian Horticulture Statistics Handbook (2019/20)

Nursery production value has grown steadily since 2014/15 at an average annual rate of 3.3%. The largest increase occurred most recently from 2018/19 to 2019/20, with growth of \$123 million, representing a 5% increase.

TABLE 4. Nursery seasonality by state

STATE	19/20 \$M	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
New South Wales	\$768.9	High	Medium	Low	None	None	None	Low	Medium	High	High	High	High
Victoria	\$717.6	High	Medium	Low	None	None	None	Low	Medium	High	High	High	High
Queensland	\$768.9	High	Medium	Low	None	None	None	Low	Medium	High	High	High	High
Western Australia	\$205.0	High	Medium	Low	None	None	None	Low	Medium	High	High	High	High
South Australia	\$51.3	High	Medium	Low	None	None	None	Low	Medium	High	High	High	High
Tasmania	\$17.9	High	Medium	Low	None	None	None	Low	Medium	High	High	High	High
Northern Territory	\$33.3	High	Medium	Low	None	None	None	Low	Medium	High	High	High	High

Fresh production legend	High	Medium	Low	None
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Source: Australian Horticulture Statistics Handbook (2019/20)

Plant protection, biosecurity and sustainability

Australia is under constant risk of plant biosecurity incursions with ever-increasing numbers of imported goods (including cut flowers and foliage), mail items, domestic travel and international arrivals contributing to the elevated risk of introducing emergency plant pests. Production nurseries grow over 30,000 plant species and cultivars, and trade and distribute live germplasm, making them more highly exposed to plant biosecurity risks than other plant industries. Furthermore, as young plants are typically sold, any potentially infected plants, particularly those that are asymptomatic, can have devastating impacts along supply channels including plant and tree collapse in both consumer and commercial landscapes, diminished crop yields in vegetables and tree/vine crop failures in orchards and forestry.

Nursery crops are the starter plants across horticultural cropping systems, therefore, the impacts of failures in the plant protection and biosecurity systems have long-term financial, business and sustainability consequences, which drives the priority setting by industry of high-health plant production. By investing in the Australian Plant Production Standard (APPS), the nursery industry encourages the production of only high-health plants under sustainable cropping systems, which significantly mitigates plant pests and biosecurity risks, reduces losses (e.g., disposal of sick plants), increases efficiencies (labour and plant protection inputs) and improves productivity.

By being proactive in the plant protection and biosecurity space, qualified growers have been allowed to self-certify products for interstate trade through Nursery Industry Accreditation Scheme Australia (NIASA) and BioSecure HACCP accreditation. Active risk mitigation using APPS components demonstrates that there is a high chance of early detection of plant pests in nursery production and helps to manage reputational risk around biosecurity threats. The nursery industry invests heavily in these areas and puts significant effort into plant protection and national biosecurity efforts through active involvement in the Emergency Plant Pest Response Deed, to ensure that growers have access to the support, resources, and tools that they need to make their business more profitable, sustainable, and biosecurity aware.

Investments in these areas does more than help with plant protection and biosecurity management, they aim to make production nurseries more productive and profitable, while improving their sustainability. A high-health production nursery improves the odds of early detection for exotic plant pests, helping to manage endemic plant pests and improving the overall health and physiological aspects of plants produced. Managing water resources and other production inputs such as growing media, fertiliser, pesticides, containers, energy, labour, waste, etc, enhances sustainability and environmental stewardship credentials while lowering production costs, increasing productivity and improving the quality of the plant produced.



APPENDIX 2: Nursery 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. Although the outcome and ultimate impact of the pandemic are unknown, areas of investment across horticulture 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 having 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 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

The below table has been used to analyse the nursery 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. Nursery SWOT analysis

The nursery industry	
Strengths	<ul style="list-style-type: none"> As a 'green' industry, the nursery industry has a positive image in front of government, media and the community. Nursery products are an important part of the Australian lifestyle The greenlife industry is booming and in growth stage The industry provides major environmental, economic, health and wellbeing benefits to the Australian community. Its products make a difference The industry contributes significantly to the Australian economy both directly through direct plant sales to home, landscaping and government sectors, but also as suppliers of plants to the broader production horticulture sector as seedlings or trees Demand for nursery products is increasing Passionate industry community: diverse, innovative and knowledgeable Excellent national biosecurity systems protect the Australian industry from major pests and diseases Excellent diversity of plants, including Australian natives, ensures that there is a plant for all seasons and regions Levy-funded R&D has already addressed a wide range of industry issues Nursery includes a plethora of plants, trees and shrubs – it is not just one product In 2015/16 there was almost no action on urban greening. Less than 10 out of 139 urban local government areas (LGAs) and no state governments had an urban greening strategy, and urban green space was being removed at a concerning rate. In 2021, the landscape is considerably changed. 122 out of 139 LGAs now have an urban forest strategy, backed by metropolitan-level programs across Western Australia, New South Wales and Victoria Gardening/greening was a huge trend during COVID-19 and continues to be a growing trend as people spend more time at home

The nursery industry

Weaknesses

- Very easy to enter the industry, resulting in many smaller operators selling at low prices and reducing overall industry profitability
- Chain store/large retailers dominant within the retail sector
- Red tape for market access – no harmonised approach between the states. Lack of system for nursery registration poses a biosecurity risk
- Lack of industry training and development recognition. Not enough suitably qualified people or young people entering the industry
- The level of business and technical sophistication throughout the industry is generally low
- Industry does not promote itself well enough and needs greater effort in shaping end-user perceptions about the industry, independent operators and plants
- Not addressing the barriers for the poor uptake of technology and innovation within the industry
- ‘Backyard operators’ and those who do not know their cost of production or the value of their product
- High staff turnover, and the inability to attract and retain suitably qualified people into the industry
- Nursery program supports two distinctive brands; ineffective use of funding – *Greener Spaces Better Places* and *Plant Life Balance*
- PLB too narrow an opportunity; focus on millennials and indoor plants
- Difficulty for the government to measure results as the horticulture marketing role is about influencing, not direct selling
- Nursery is a diverse industry, not able to be single minded with comms
- Nursery marketing program lacks cohesion under a unified brand
- Urban greening in decline due to urbanisation of communities resulting in more grey area (i.e., *Where Will All The Trees Be* report)
- Water-dependent industry

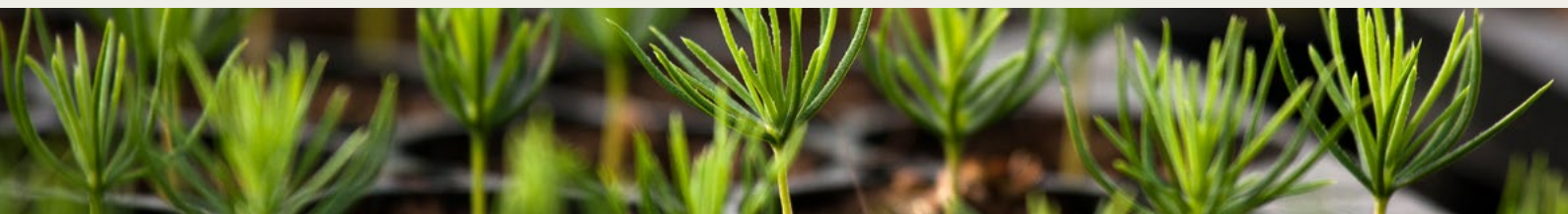
“Greater demand for greenlife through 2019/20 has resulted in a significant increase in the proportion of stakeholders confident in the industry’s future.”



The nursery industry

Opportunities

- Increase the economic size of the industry by strongly positioning the financial, health and wellbeing benefits of plants with target audiences
- Make cities more liveable as per *Greener Spaces Better Places* program, and run suitable programs that promote the benefits of greenife and nursery products
- Greater collaboration with other green industry stakeholders including, turf, landscape architects and gardeners, and other nursery industry organisations as well as other horticulture sectors
- Capitalise on the impact of climate change through the development and implementation of a nursery sustainability program
- Continue and maintain the strong focus on biosecurity to protect Australia from overseas pest and disease incursion
- Harmonise interstate biosecurity protocols and have nursery registration
- Develop better industry data showing value of industry, number of people employed and benefit to economy
- Expand reach to capture opportunities within horticulture production
- Improve use of technology:
 - » Monitoring
 - » Disease detection
 - » Remote systems
 - » Automation
 - » Waste heat and electricity obtained from bio-energy
- Stronger focus on BMPs within the industry to improve professionalism, quality of plants and production efficiencies, including reducing use of chemicals
- Support industry training and development to attract younger people into the industry. Create better career paths to attract forward-thinking people into the industry
- Create one masterbrand under the *Greener Spaces Better Places* program
- More focus on consumer marketing/retailing
- Expand target audience beyond millennials and indoor gardeners (the Hort Innovation project *Nursery Fund – Consumer usage and attitudes research* (NY20002) will drive this opportunity)
- More influence at a LGA level
- Urban greening on private land
- Trend to incorporate more green space in local planning
- Grow demand by communicating the financial, health and wellbeing benefits
- Communicate benefits and positive impact on obesity, mental and physical health
- Build on positive relationships with federal, state and local government to support and help deliver more green space
- Invest in research to identify opportunities to further grow the industry and communicate its benefits



The nursery industry

Threats

- Increase in national and international biosecurity risks
- Local planning not permitting enough green space in developments. Australian community lacks perceived value of greenlife products
- Drought, national water reform and government policies that restrict access to water for nursery production and green space
- Rising cost of production, including for unskilled labour, energy
- Aging workforce with inadequate opportunities for training and skills development for new workforce participants
- Urbanisation creating greater pressure on peri-urban nursery businesses
- Inadequate knowledge of consumers; the industry does not consider the future needs of consumers
- Greater competition for discretionary income (e.g., spending on leisure vs spending on nursery products)
- Reduced access to inputs, such as existing and new chemicals
- Urban densification reducing green space nationally



APPENDIX 3: People consulted

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

NAME	INDUSTRY ROLE	REGION
John Barnsley	Nursery	Hawkesbury, NSW
Brent and Scott Tallis	Nursery	Sydney, NSW
Steve Soloman	Nursery	Hawkesbury, NSW
Willem Duiveman	Nursery	Lake Macquarie, NSW
Dan Ewings	Nursery	Sydney, NSW
Jonathan Steeds	Nursery	Central Coast, NSW
Mal Morgan	Nursery	Sydney, NSW
Gary Eyles	Nursery	Hawkesbury, NSW
Noel Deakin	Nursery	Sydney, NSW
Carole Fudge	Nursery	Perth, WA
Hamish Mitchell	Nursery; Nursery SIAP member	Melbourne, VIC
Karen Brock	Nursery; Nursery SIAP member	Launceston, TAS
John Bunker	Nursery; Nursery SIAP member	Brisbane, QLD
Sonja Cameron	Nursery; Nursery SIAP member	Hunter, NSW
Peter Vaughan	CEO, Greenlife Industry Australia; Nursery SIAP member	Sydney, NSW
Anthony Tesselaar	Plant marketer; Nursery SIAP member	Dandenong Ranges, VIC
Glenn Fenton	President, Greenlife Industry Australia; Nursery	Melbourne and West Gippsland, VIC
Ben Grange	Vice President, Greenlife Industry Australia; Potting mix manufacturer	Hawkesbury, NSW
David Matthews	Nursery	Dandenong Ranges, VIC
Ian Atkinson (with various member input)	CEO and Executive Committee members, Nursery & Garden Industry Queensland	Brisbane, QLD
Matthew Lunn (with various member input)	Executive Officer and Executive Committee members, Nursery & Garden Industry Western Australia	Perth, WA
Craig Taberner and David Reid	CEO and Policy and Technical Manager, Nursery & Garden Industry Victoria	Melbourne, VIC



APPENDIX 4: Reference material

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APPENDIX 5: List of acronyms

AIP	Annual Investment Plan
APPS	Australian Plant Production Standard
APVMA	Australian Pesticides and Veterinary Medicines Authority
BMP	best management practice
CSIRO	Commonwealth Scientific and Industrial Research Organisation
FY	financial year
FTE	full-time equivalent
GIA	Greenlife Industry Australia
IPDM	integrated pest and disease management
IRB	Industry Representative Body
KASA	knowledge, attitudes, skills and aspirations
KPI	key performance indicator
LGA	local government area
M&E	monitoring and evaluation
MRL	Maximum Residue Limit
NGIV	Nursery & Garden Industry Victoria
NGIWA	Nursery & Garden Industry Western Australia
NHRN	National Horticulture Research Network
NIASA	Nursery Industry Accreditation Scheme Australia
PHA	Plant Health Australia
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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