# Australian Organic Horticulture: RD&I Strategy 2026-2035

June 2026

**Opportunities for research, development and innovation to grow the Australian certified organic horticulture industry**

# Contents




The Australian Organic Horticulture Sector Strategy 2026-2035 was developed in the project RD&I Strategy for the Australian Organic Horticulture Sector (LP24001) funded through Hort Innovation Frontiers with co-investment from Southern Cross University, Australian Organic Ltd (AOL), Australian Certification Ltd (ACO), Bio-Dynamic Research Institute (BDRI), Organic Food Chain (OFC), and Southern Cross Certified (SXC) and contributions from the Australian Government.

## Acknowledgements


# Foreword

The Australian certified organic industry contributed ~$2.6Bn to the Australian economy in 2021. Demand for certified organic food continues to grow strongly in both domestic and export markets, with certified organic horticulture a lead driver of the certified organic market in Australia. Recent market research confirms strong growth potential in consumer demand for organic fruit and vegetables.

Certified organic Australian horticulture is a high-integrity, credentialed and traceable system of production across vegetables, fruit, herbs and nuts. It is defined by strict standards, third-party verification, and the exclusion of synthetic pesticides, fertilisers and GMOs.

**The Australian Organic Horticulture Research, Development and Innovation (RD&I) Strategy 2026-2035** provides a targeted investment roadmap to unlock sector growth, with the goal of **doubling the value and impact of certified organic horticulture by 2035** positioning it as:

- a high-value growth segment of Australian horticulture
- a trusted, verified system for premium domestic and export markets
- a pathfinder for sustainable production systems across the broader industry.

The Roadmap provides a clear, collaborative framework to target investment across the certified horticulture value chain. By focusing on opportunities and constraints that differentiate the certified organic sector, it provides a prioritised and structured plan. The Roadmap outlines common areas of investment for horticulture where certified organics faces greater urgency, as well as essential unique, targeted areas of RD&I investment.

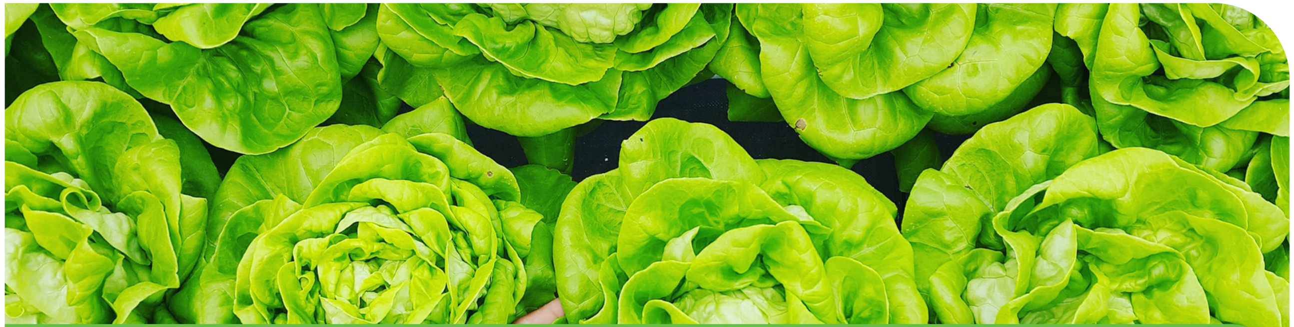
Strategic priorities address three key areas:

- enhancing the organic proposition
- cooperative innovation
- technical innovation.

There is opportunity to invest in shared and targeted infrastructure and knowledge exchange not currently addressed through mainstream programs.This positions the organic sector to scale competitively to meet growing demand, while remaining resilient, commercially viable and globally competitive.

Although focused on certified organic production, this Strategy is also expected to deliver positive benefits for the wider horticulture industry — reinforcing Certified Organic Australian horticulture's role as a pathfinder for sustainable production.

# Australian Organic Horticulture Research, Development & Innovation Strategy 2026-2035



## Double the VALUE & IMPACT of the Australian certified organic Horticulture Sector by 2035.

## Investment priorities

Invest in research, development and innovation to unlock supply and new markets; increase productivity and efficiency; scale adoption and strengthen market integrity; and improve profitability and positive impact for certified organic growers.

### The organic value proposition

- Consumer & Market Intelligence
- Evidence-Base for Organic Claims
- Reduce Waste
- Improve Continuity of Supply
- Global Premium Profile

IMPACT: Evidence-based Growth & Impact

### Cooperative innovation

- National Knowledge Hub
- Skills & Workforce Agility
- Reduce Waste
- Seamless Transition to certified organic
- Improve Compliance Processes

IMPACT: Knowledge at Scale

### Technical Innovation

- Access to Biological Input Efficiency
- Organic Compatible Biosecurity
- Traceability & Packaging alternatives

IMPACT: Increased Supply Efficiency

### UNIQUE DRIVERS: certified organic Australian Horticulture RD&I

Credentialed production and supply chain free of synthetic chemicals creates urgency for innovation, and research priorities shared with conventional horticulture

- Improved productivity through automation
- Evidence based biological inputs
- Organic-compliant biosecurity and unique research requirements and outcomes for organic
- Strict low input, low impact bounded innovation
- Protect market trust and value (nutrition, residue reduction, traceability, water quality, whole system impacts, biodiversity)
- Enhanced support for entry and transitioning growers whilst improving knowledge development for all growers

### OPPORTUNITY COST: If *NO* Investment in organic Hort RD&I

- Certified Organic market growth signals unable to be realised
- Growing demand for certified organic met by imports
- Market diversity reduced through access
- Advancement of low input low impact farming options slowed
- Diversity in farming system and supply chains vulnerable

### Principles

- Supply Resilience
- Evidence-Based
- Consumer-Centric
- Targeted Strategic Investment
- National Collaboration

### Impact

- Enhanced Profitability
- De-risk Transition to Organic
- Market Differentiation
- Cooperative Sector ecosystem
- Technological Innovation
- Wider Benefit for Horticulture

Strategy based on extensive consultation carried out in the project RD&I Strategy for the Australian Organic Horticulture Sector (LP24001) funded through Hort Innovation Frontiers with co-investment from Southern Cross University, Australian Certification Ltd (ACO), Bio-Dynamic Research Institute (BDRI), Organic Food Chain (OFC), and Southern Cross Certified (SXC) and contributions from the Australian Government.

## Development & Consultation

This Strategy is based on extensive stakeholder consultation and an analysis of the global shifts in certified organic horticulture, relevant RD&I investment, and wider megatrends.

## Stakeholder Engagement

More than 100 individuals participated through six regional roundtables and targeted one-on-one consultations. Representation spanned the entire supply chain – including organic producers of all scales across every state and territory, and processors, exporters, major and specialised retailers. Engagement also included peak bodies, government agencies, input and extension services, research providers, and all DAFF-approved certification bodies. A Project Reference Group provided additional guidance, ensuring the Strategy benefited from diverse expert oversight and comprehensive industry discussion.

## Refinement and Implementation

Insights from these consultations were used to define certified organic-specific RD&I strategies and outcomes. This collaborative approach confirmed and prioritised challenges currently facing the sector, establishing a clear consensus to address systemic barriers. By doing so, the Strategy aims to unlock opportunities for organic horticulture growth and resilience but is also expected to deliver value across the wider horticultural industry.

## Sector Value and Market

- The organic industry contributed ~$2.6bn to the Australian economy in 2022[1]. Certified organic horticulture is a lead driver. Recent market research confirms strong growth potential in consumer demand for organic fruit and vegetables.
- Major retailers account for over 60% of sales, providing the scale for industry growth. Farmers' markets and speciality retail remain vital for high-provenance storytelling and direct consumer engagement.
- The certified organic segment has revenue projected to grow by nearly 20% in 2026 alone[2].
- Challenges addressed by this Strategy focus on **scaling supply**, improving **efficiency of production**, increasing market access and providing **evidence-based** market differentiation.
- **A scientifically backed "organic proposition" is urgently required to prevent market dilution from "greenwashing", and to underpin trusted, certified provenance.** By maintaining and replenishing soil fertility through natural farming systems, and exclusion of synthetic chemicals the sector delivers a safe, high integrity product meeting consumer, market and environmental expectations.

1 Australian Organic Market Report 2023 (AOL) ISSN 2653-8474. $2.6bn value of domestic market, with $851m total added-value for the organic industry; fresh and processed fruit, nuts, vegetables, herbs total $90m.

2 IBISWorld. (2025). Organic Crop Farming in Australia (ANZSIC OD4191). Retrieved from IBISWorld database; revenue growth forecasts for 2026

# Acronyms & abbreviations

| | |
|---|---|
| ACCC | Australian Competition and Consumer Commission |
| ACOS | Australian Certified Organic Standard, owned by Australian Organic Ltd (AOL) |
| AS 6000:2015 | Australian Standard for Organic and Biodynamic Products, managed by Standards Australia, a private non-governmental organisation. |
| COP | Community of Practice |
| DAFF | Australian Government Department of Agriculture and Fisheries & Forestry |
| DCCEEW | Australian Government Department of Climate Change, Energy, Environment and Water |
| E&A | Extension and Adoption |
| ESG | Environmental, Social & Governance |
| IFOAM | International Federation for Organic Agricultural Movements |
| IPDM | integrated Pest and Disease Management |
| KPIs | Key performance indicators |
| M&E | Monitoring and Evaluation |
| National Standard | The National Standard for Organic and Bio-Dynamic Produce |
| NBT | New breeding technologies such as gene editing |
| NRM | Natural Resource Management |
| OECD | Organisation for Economic Cooperation & Development |
| RDC | Research & Development Corportation |
| RD&I | Research, Development, and Innovation |
| ROI | Return on investment |
| SME | Small and medium enterprises |
| Strategy | Australian Organic Horticulture RD&I Strategy 2026-2035 |
| VC | Venture Capital |

*The DAFF-registered certifiers:*
- ACO Certification Ltd (ACO)
- Southern Cross Certified (SXC)
- Organic Food Chain (OFC)
- Bio-Dynamic Research Institute (BDRI)

# Definitions and sector context

**Certified organic* horticulture** focuses on the sustainable production, processing and supply systems for vegetables, nuts, fruit and herbs where farming activity has been directed toward:

- Reducing environmental impact.
- Improving soil and land biodiversity.
- Providing plants with naturally occurring nutrients.
- Strict prohibition of synthetic pesticides, synthetic fertilizers, and Genetically Modified Organisms.

## Certification and Standards

Australia is currently the only OECD country without a mandated domestic organic national standard.

Consequently, it remains possible to sell products labelled as 'organic' without providing proof of adherence to organic principles or standards. The organic industry continues to lobby for regulatory reform.

To be labelled as 'certified organic' for sale within Australia, a product must be genuinely certified organic, and any certification mark is used in accordance with the certification requirements. This is to comply with ACCC guidelines. DAFF-registered certification agencies ensure products undergo a rigorous third-party inspection and approval process. Organic operators may choose to certify to The National Standard for Organic and Bio-Dynamic Produce (National Standard) or the Australian Certified Organic Standard (ACOS). As an alternative, a smaller number of operators choose to certify to the AS 6000:2015 standard.

While domestic standards vary the National Standard for Organic and Bio-Dynamic Produce (managed by DAFF) serves as Australia's regulated, technical export standard. This provides the essential basis for facilitating export market access via government-to-government equivalence with international trading partners.

Regulatory & Policy Framework Operations are governed by DAFF (export), APVMA (inputs), and FSANZ (food standards). To reduce operational complexity, many in the industry are adopting the Freshcare Standard alongside organic certification, enabling harmonised food safety and environmental auditing as an integrated "one-audit" process.

* In this document 'organic' is taken to refer to certified organic and bio-dynamic production.

## Strategic Alignment & Market Pressures

The certified organic horticulture sector is strategically aligned to key national initiatives:

- National Food Security Strategy (2026): Organic systems can contribute through supply chain resilience with reduced input dependency and long-term landscape productivity.
- Traceability Mandate (2023–2033): The organic sector acts as the "lead adopter" for the automated provenance and data integrity DAFF now mandates for premium exports.
- AASB S2 Reporting: Effective July 1, 2026, major retailers require granular "Scope 3" (value chain) emissions data. Organic's low-input profile is now a high-value commercial asset.
- Decarbonisation Plan: Organic's alignment with this DAFF/ DCCEEW $63.8m initiative provides the pathway for growers to fund transitions to "Leaner, Cleaner, and Greener" systems.

## Leading Industry Innovation

Reflecting **Hort Innovation Priorities** 1.2 & 1.3 (*Sustainability & Breakthrough Research*), the certified organic sector has acted as a "pathfinder" for the broader $16bn industry by pioneering:

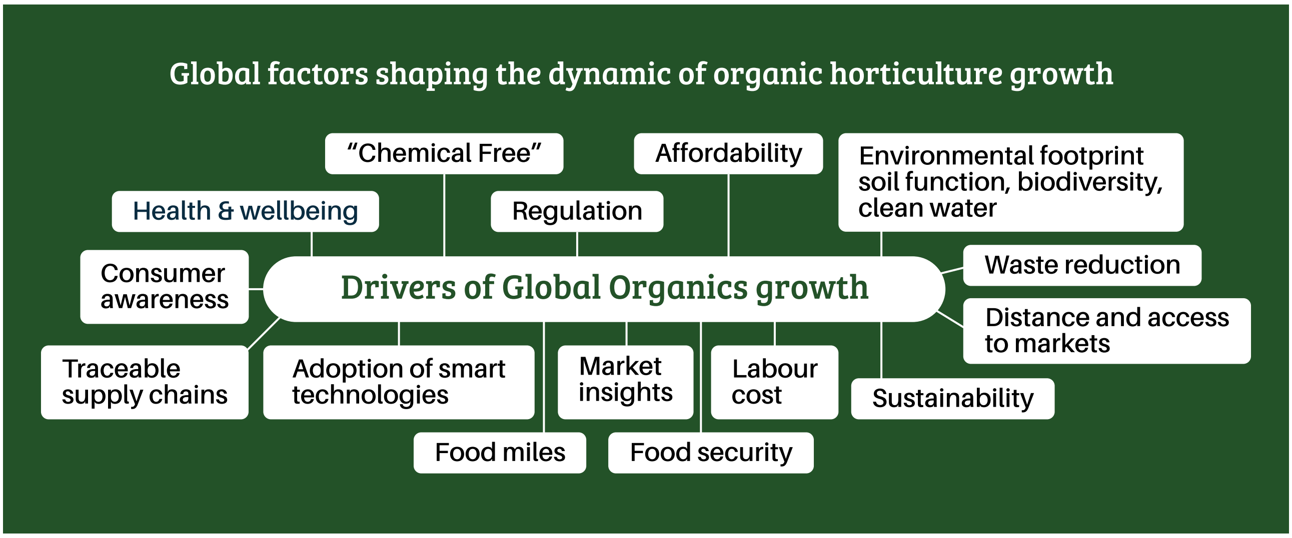
- **Residue Management**: Non-synthetic alternatives to waxes and post-harvest chemicals.
- **Biological Control**: Maturing IPM (Integrated Pest Management) to minimise production losses.
- **Outcome Verification**: A shift from input-monitoring to data-driven product quality and provenance verification.

# What is happening internationally?

## The Global Regulatory Benchmark

The International Federation for Organic Agricultural Movements (IFOAM – Organics International) sets the global framework for organic principles, while the Codex Alimentarius (a joint FAO/WHO body) provides the essential framework for international food standards.

Australia is currently the only OECD country without a mandated domestic organic national standard.




## Refining the Value Proposition

Global organic retail sales were $240Bn[3] in 2024. Market behaviour in other developed economies is built on an evolving narrative encompassing sustainable production, biodiversity, human nutrition, and wellbeing.

The past decade has seen system fragmentation, with loosely defined 'regenerative' and other sustainability claims creating a confusing marketplace for consumers. Global leaders are resolving this by clearly articulating certified organic as a clearly differentiated high-integrity, regulated credential (vs a claim). This approach is increasingly supported by verified certified organic benefits and impacts.

From Process to Outcomes: For decades, organic certification has been primarily focused on "process-based" production and prohibited inputs. In 2026 this has shifted toward outcome-based verification focused on: zero-residue testing, verified nutrient 'density', biodiversity, water quality, and soil carbon sequestration.

For Australian certified organic growers, this shift requires consolidation of the "multi-compliance" paper trail that currently burdens producers, replacing it with high-integrity data that validates the premium status of certified organic products and streamlines market access.

## Global Policy and Key Initiatives

In 2026 vague sustainability claims are being replaced by strict legal mandates to eliminate greenwashing and act as gatekeepers for domestic retail and international trade, including:

- EU Empowering Consumers Directive (Sept 2026): bans generic environmental claims like "eco-friendly", "green" or "climate neutral" unless backed by scientific, third-party verified data implemented via a certification system or established by a public authority.
- EU Action Plan for the Development of Organic Production: With a target of reaching 25% of all agricultural land under organic farming by 2030 (OrganicTargets4EU), the EU has pivoted its R&D budget. Over €1 billion is now dedicated to "alternative plant protection," - focusing on high-tech biopesticides and biologicals to replace synthetics.
- European and other Organic Action Plans which outline targets, investment and policy context for organic agriculture transitions.
- USDA "Inverted" Food Pyramid & Nutrient Density (2026): A landmark reset of US federal nutrition policy now prioritises "Real Food"-specifically whole, nutrient-dense produce. This has redefined the value of the USDA Organic Transition Initiative ($300m) that supports infrastructure, water quality, animal and farmer welfare, with a market re-focus on nutritional outcomes.

3 (€145bn) https://www.organic-world.net/yearbook/yearbook-2026.html

## Technology and Practice Trends

Convergence of organic principles and precision technology is closing the "labour and yield" gap via:

- Precision Biologicals: R&D beyond broad "organic sprays" to target microbial inoculants and bio-stimulants that deliver predictable yield outcomes.
- Autonomous & Laser Weeding: Mature robotic implementation and scalability is addressing the intensive labour challenge and bringing down entry-costs.
- Automated Compliance: AI-driven sensors and satellite imagery enable direct capture of field data, reducing manual audit overheads.

## A Timely Opportunity

Rather than having to reinvent the wheel, Australia can leverage these major global investments and therefore maximise the return on domestic RD&I investment. This can be particularly effective for evaluating organic-compatible biopesticides and systems for low-cost verification of nutritional composition.

To achieve this, this Strategy proposes exploring formal knowledge-sharing agreements with international organisations which could include:

- FiBL (Switzerland): To align Australian metrics with international soil and biodiversity benchmarks.
- The Rodale Institute (USA): To leverage their 40+ years of trials on the economic viability and nutritional outcomes of regenerative and organic systems.

# State of Play: Why RD&I is needed now

The Australian certified organic horticulture sector is at a critical inflection point. Demand is accelerating across domestic and export markets driven by growing consumer demand for verified, reside-free produce and increasing retailer and regulatory requirements for traceability and ESG reporting; whilst legislative inertia and technological integration create strain. With the broader horticulture industry targeting $20B by 2030, the organic segment is a high-growth outlier, with 2026 crop farming revenue projected to grow by nearly 20%[4].

Constrained supply growth for certified organic is not primarily a demand issue — it is a systems, capability and investment challenge.

Targeted RD&I is required to:

- Unlock supply growth and continuity
- De-risk production and farm conversion
- Strengthen market integrity and premium positioning
- Enable alignment with emerging regulatory and reporting frameworks

Without this investment, the sector risks supply shortfalls, increased reliance on imports, and erosion of its high-value market position.

| | |
|---|---|
| Strengths | Market differentiation: Certification provides a distinct, verified advantage in competitive retail and export markets. |
| | Climate Resilience: In 2026, certified organic production systems are demonstrating superior resilience to temperature extremes and drought. Enhanced Soil Biological Function and higher organic matter improve water retention, buffering crops against climate variability. |
| | Global Alignment: Strategic alignment with overseas RD&I investment and global trends toward mandatory, evidence-based claims. |
| | The Organic Proposition: A clear industry requirement for a scientifically backed "organic proposition" to defend market share and prevent dilution from uncertified claims. |
| Weaknesses | Regulatory Gap: The absence of national domestic regulation currently permits unverified organic claims, undermining certified operators. |
| | Input Bottlenecks: Critical constraints identified in consultations include limited access to high-quality organic seed, approved biological inputs, and bio-secure, large-scale compost. |
| | Compliance Cost: Administrative and financial burdens remain high and a barrier for small-scale grower transition, requiring a shift towards streamlined, digital-first auditing. |
| | RD&I Fragmentation: A two-decade decline in public sector capacity (Universities and State Departments) has left the sector without dedicated, centralised research support. |
| Opportunities | Strategic Convergence Growth and market assurance will further benefit from the convergence of domestic regulation and commercial necessity. |
| | The Participation Gap Australia manages over 50% of the world's organic land but captures only 1% of the market. Transitioning large-scale assets to high-value horticulture can satisfy domestic demand and secure a foothold in the AU$240bn global market. |
| Threats | Market Integrity & Fraud Consumer trust remains the sector's most fragile asset – 31% of consumers report being misled by "organic" claims. The sector is exposed to sophisticated fraud, including AI-generated certification forgery and conventional produce substitution. |
| | The Trust Gap: The use of terms like "spray-free" or "natural" by uncertified operators directly undermines the premium value and consumer trust of certified products. |
| | See also *Opportunity Costs* on next page |

4 IBISWorld.(2025). Organic Crop Farming in Australia (ANZSICOD419). Retrieved from IBIS World database; revenue growth forecasts for 2026

# Strategic risk of inaction

## The Opportunity Cost of Inaction (not investing in RD&I for Australian certified organic horticulture)

### DEMAND FOR CERTIFIED ORGANIC FOOD CONTINUES TO GROW STRONGLY IN BOTH DOMESTIC AND EXPORT MARKETS.

Failure to invest in targeted RD&I for organic horticulture presents material economic, **market and policy risks**. Global organic retail sales exceeded US$240Bn in 2024, Australian organic crop farming revenue is projected to grow nearly 20% in 2026. Major Australian retailers report persistent supply shortages across key horticulture categories, including berries, fresh vegetables and avocados.

Yet **supply growth is constrained by limited RD&I investment in organic production systems; barriers to farm conversion; lack of technical agronomy capacity;** and **insufficient organic-compatible inputs and seed supply.**

**Certified organic farming systems deliver measurable environmental outcomes** that are increasingly valued by governments, investors and supply chains.

Evidence from international research demonstrates that organic farming systems can:

- **reduce pesticide residues** in food and waterways
- **improve soil carbon** and soil biological function
- **increase biodiversity** and pollinator populations
- **reduce nutrient runoff** into waterways.

As pressure grows to demonstrate environmental performance across food supply chains, certified organic systems provide **a ready-made, verified framework for delivering these outcomes** but require RD&I investment to deliver these outcomes.

Modelling suggests that if even **5% of Australian horticultural land transitioned to certified organic production**, the sector could deliver:

- significant pesticide reduction
- measurable improvements in biodiversity and water quality
- increased supply of high-value produce to domestic and export markets.

# The opportunity cost of inaction

Table 1.1 Organic Land Transition Scenarios

| Scenario | Organic Landshare | Estimated growers | Market impact |
|---|---|---|---|
| Current | ~1–2% horticulture | ~900 | Supply shortages |
| Moderate growth | 5% | ~2,000 | Domestic supply stability |
| Global alignment | 10% | ~4,000 | Major export sector |

Table 1.2 Strategic Inaction Risks and Impacts

| Risk | Impact |
|---|---|
| Supply Risk | • Domestic demand increasingly met by imports<br>• Missed opportunity to capture premium retail categories |
| Export risk | • Inability to meet requirements for verified, traceable supply<br>• Lost access to high-growth international markets |
| Market Integrity Risk | • Continued erosion of consumer trust due to unverified claims<br>• Price premium compression |
| Transition Risk | • Continued barriers to farm conversion<br>• Under-utilisation of existing agricultural land |
| Policy & ESG Risk | • Horticulture sector misses opportunity to position organic as a ready-made ESG solution and to deliver verified ESG outcomes<br>• Reduced alignment with:<br>» National traceability strategy<br>» AASB S2 reporting<br>» Environmental targets |

# RD&I strategy targeted to organic horticulture

Australia is already investing in major agricultural innovation areas including biological inputs, robotics, digital agriculture and production system transformation. These investments are highly relevant to organic horticulture.

However, certified organic production operates within a distinct regulatory and biological system. As a result, many of these innovations require:

- Greater urgency and acceleration to address immediate certified organic supply constraints
- Adaptation to organic-compliant systems
- Validation under organic production conditions

In addition, there are critical areas where mainstream RD&I does not meet the needs of organic systems and where targeted investment is required.

## Where Organic RD&I Differs — and Where It Aligns

Australia is already investing in major horticulture innovation areas including:

- Biological inputs
- Robotics and automation
- Digital agriculture
- Climate resilience

These investments are **highly relevant to organic horticulture**. However, **certified organic systems require increased urgency, targeted adaption and additional RD&I** due to regulatory, biological, system and market constraints.

## A. Shared RD&I Priorities (Accelerated for Organic)

Areas where organic benefits directly from conventional investment but requires acceleration; adaption to organic systems; and earlier adoption pathways.

Organics should be a **lead adopter and testbed** for these investments.

| Shared Investment Area | Why it Matters for Organic | Strategic Role |
|---|---|---|
| Biological inputs | Replaces synthetic inputs | Accelerate validation + access |
| Robotics & automation | Addresses labour intensity | Fast-track adoption for organic systems |
| Digital agriculture | Enables measurement + traceability | Reduce compliance burden |
| Climate resilience | Organic systems already advantaged | Quantify + monetise advantage |

## B. Organic-Specific RD&I (Requires Targeted Investment)

Areas where **mainstream RD&I does not address organic needs**. These unlock growth and are where **targeted investment is essential**.

| Organic-Specific Constraint | RD&I Requirement |
|---|---|
| Input restrictions | Biological efficacy, approvals, alternatives, non-GMO |
| System complexity | Whole-of-system agronomy (soil, crop rotation, ecological interactions, biodiversity) |
| Certification burden | Third party verification, traceabiity, digital compliance + "one-audit" systems |
| Transition risk | Conversion pathways to reduce risk + conversion economic models |
| Market integrity | Traceability + verification systems |
| Biosecurity | Organic compliant biosecurity responses |
| Accelerating consumer demand | Increase production capacity + measure consumer benefits and impacts |

# RD&I to drive growth

Prioritised initiatives identified from sector consultation are focused on increasing supply and demand.

These principles ensure RD&I investment is outcome-driven, aligned to industry priorities, and focused on maximising return on investment for growers and the broader horticulture sector.

## Principles

| | |
|---|---|
| Enhance Profitability | Prioritise cost-effective mechanisms to strengthen the viability for certified organic producers, processors, wholesalers, and retailers. Address organic-specific constraints. |
| Evidence Based | Develop and implement a scientifically backed organic value proposition to strengthen brand recognition of certified Australian organic horticultural produce; Quantify health benefits of organic systems through residue and nutritional profiling and establish any causal connections between soil and human health. |
| Consumer-Centric | Strengthen understanding of evolving consumer drivers, transparency expectations, and residue-free preferences for certified organic horticulture. |
| Supply Resilience | Secure robust supply and quality assurance through technical innovation to meet rising market demand. |
| Quantify Natural Capital | Deliver measurable Environmental, Social & Governance outcomes—including biodiversity and carbon sequestration—to satisfy AASB S2 reporting and validate public-good contributions. |
| Transparent Communication | Provide consistent, high-integrity information to stakeholders across the value chain. |
| Targeted Strategic Investment | Maximise market share and reduce waste to de-risk the transition for conventional growers. |
| National collaboration | Implement a unified approach to knowledge sharing and Cooperative Innovation. |
| Wider Industry Benefit | Execute “pathfinder” innovations where organic R&D to scale solutions for the entire horticulture sector. |

## THE ROADMAP

The following phased roadmap is dependent upon attracting investment. It structures initiatives by priority aiming to deliver early impact while building long-term system capability. Success will rely on an affordable and phased approach, ensuring that foundational "wins" create the momentum for longer term sustainable growth of the certified organic horticulture sector. Priorities address three critical areas: enhancing the *Organic Proposition*, *Cooperative Innovation*, and *Technical Innovation*.

1. Near Term Priorities and Early Wins (0–12 Months)

- *Project briefs*: Deliver set of fundable RD&I propositions.
- *Consumer Research*: understand drivers and barriers to organic consumption.
- Profiling Pilot: Launch a rapid desk study on "synthetic-residue-free" status in key categories (berries/avocados/etc.) to give retailers immediate marketing data.
- *National Organic Knowledge System* established: Appoint a 'Knowledge Broker' to coordinate and launch the "Community of Practice" digital platform, to secure and scale industry expertise
- *Organic-specific Digital Provenance* tracking system including certification through supply chain.

2. Mid-term Priorities (1–3 Years)

- "*One-Audit*" *Prototype*: Work with certifiers to map a single digital compliance pathway that covers both Organic status and AASB S2 (ESG) reporting
- Establish framework and network for systematic *residue testing* in supply chain
- Standardise benchmarking for *soil testing*
- Systematic review of global *composting tech* and *certified large-scale inputs*.
- Desk study and trials targeted on organic-compliant biosecurity treatments (e.g. heat, $CO_2$, UV)
- Establish a *Biological Efficacy Database* to match farm requirements to validated organic products.

3. Long-term System Investments (3–10 Years)

- Deliver evidence base for nutritional profiling
- Determine viability of partnerships to establish domestic breeding program
- Focus on post-harvest and supply factors to reduce waste compared to conventional produce
- Biological input efficacy protocols.

# Investment opportunities

This Strategy is designed to guide **coordinated investment across public, private and industry sources**, with a focus on initiatives that:

- Unlock revenue growth
- Stengthen market differentiation
- Reduce cost and risk
- Leverage existing RD&I investment

## Indicative scenarios

| Investment Source | Opportunities & indicative Focus Areas | Targeted ROI & Scale |
|---|---|---|
| Strategic Co-Investment (Public-Private Partnerships) | **Market Acceleration**: Opportunity to fast-track domestic and export-ready berries, fruit, vegetable and nuts using global IP. | *Market*: 20-40% price premiums<br>*Scale*: National.<br>*Horizon*: 1–5 yrs. |
| | **Co-innovation Hubs**: Collaborative infrastructure to build "Organic Tech Hubs". Focus on soil biological function, carbon-sequestration and biosecurity protocols (eg bio-input testing and soil status data, seed production). | *Scale*: Regional clusters.<br>*Horizon*: 5–10 yrs. |
| Venture Capital & AgTech | **Disruptive Tech**: Private funding for autonomous weeding, AI-driven nutrient mapping, and precision organic robotics. Testing laboratory and analysis pipelines. | *Financial*: High growth/exit potential. (esp. for export)<br>*Scale*: Global<br>*Horizon*: 3–7 yrs. |
| Retailer partnerships | **Supply Integrity**: Retailer-Grower Co-Investment Model to solve the dual challenges of **supply continuity** and **waste reduction** for certified organic horticulture.<br>• De-Risking the Supply Chain: Jointly funding R&D into predictive supply modelling and "Climate-Shield" production systems that protect against the “feast or famine” cycles of organic supply.<br>• Mutual Value: Retailers co-invest in the R&D that secures their own future "**Scope 3**" and **ESG reporting** requirements.<br>• Technologies for shelf-life extension and satisfy AASB S2 reporting. | *Commercial*: Guaranteed supply lines.<br>*Scale*: National Retail.<br>*Horizon*: 1–3 yrs. |

## Risk assessment & mitigation

| Critical Risk | Impact | Mitigation Strategy |
|---|---|---|
| Funding Shortfall | High | Diversify via the Retailer Co-Investment model and explore brokerage for venture capital to reduce reliance on levies alone |
| Regulatory Stall | Med | Shift focus to Industry-Led Standards and Retailer ‘Green Tape’ requirements which often move faster than legislation |
| Knowledge Silos | Med | Knowledge Sharing 'catalysed' by a dedicated Knowledge Broker whose sole KPI is the cross-pollination of data between region |
| Market Volatility | High | Balance Demand/Supply – prioritise Predictive Supply Modelling RD&I to match range and availability to meet demands. |

## Measuring success

The Strategy will remain agile: individual projects will have specific KPIs, with overarching success measured by:

- Engagement: Adoption of organic 'Pathfinder' techniques by conventional growers (biological pest control/soil health)
- Impact: Increase number of viable organic growers, products, farm-gate value and supply chains, and adopt one-audit potential to reduce 'compliance overhead' (time/money spent on audits); quantified contributions to National Net Zero targets and environmental residue reduction.

# **Priorities** [**5**: Immediate, **4**: High, **3**: Strategic, **2**: Growth driver, **1**: Horizon]

## Outcome: The organic value proposition

Market differentiation

Australia's certified organic horticulture industry has a clear, well-understood and attractive value proposition for domestic consumers and export markets.

| Strategies | Initiatives | Outputs | Impacts | Priority |
|---|---|---|---|---|
| Understand and Drive Demand | Consumer research to deeply understand drivers and barriers to organic consumption; why consumers *should* buy organic. | Insight reports to inform RD&I priorities and delivering evidence base for lead-indicator marketing | Consumer education on farm-to-fork traceability, residue-free benefits, appearance vs intrinsic quality | 5 |
| | Systematically capture and report organic production and consumption data | Annual 'State of the sector' data dashboard | Ability to track growth and prioritise high-value investment opportunities | 3 |
| | Embed organic metrics into key Hort Innovation marketing and RD&I initiatives | Integrated consumer choice data and trust-metrics | Reduced consumer confusion between "natural", "regenerative", "sustainable", and "certified organic" | 4 |
| Reduce Waste | RD&I into biological post-harvest pest and disease reduction. | "Clean Label" storage and packaging solutions | Reduced in-store waste; increased grower productivity/margin | 5 |
| Increase Supply | Close Supply Gaps: RD&I to scale organic berry, fruit, vegetable and nut production to meet consumer demand | Technical protocols for high-demand, high-growth categories | Increased retail sales and category stability | 4 |
| Develop the Evidence Base | Establish verified evidence base to validate product claims | Authoritative information relevant to Australian organic products | Clarification of claims to inform marketing | 3 |
| | *Nutritional profiling*: research the potential causal interactions between soil and human health | Scientific evidence of nutrient density, flavour, and microbial diversity | Increased demand driven by verified healthconscious data | 3 |
| | *Residue profiling*: Systematic quantification of the "absence of synthetic residues" in marketplace | Evidence base for healthcare consequences | Competitive advantage; "lead-indicator" for conventional input reduction | 4 |
| | *ESG materiality study*: Quantify carbon, water quality and biodiversity impacts | Verified datasets for AASB S2 (Scope 3) reporting | Organic supply as a pathway for retailers and pothers top meet legal ESG goals | 2 |
| Develop Market Differentiation | Raise consumer awareness through a multiplatform "collective voice" campaign | Unified storytelling regarding the organic proposition, traceability and certified branding | Crystal clear messaging; reduced consumer confusion; increase trust | 3 |

| Strategies | Initiatives | Outputs | Impacts | Priority |
|---|---|---|---|---|
| Raise Export Profile | Deliver organic horticulture South East Asia & Middle East export growth strategy | Opportunity mapping, buyer-seller connections, and "Trade Diversification" tools | Increased premium export volumes to Singapore, Vietnam, and UAE | 3 |
| | Export Credentials: (i) Single, organic credential mark for organic (which is easily recognisable as Australian) for Australian Organic<br>(ii) Domestic regulation to unlock large market organic equivalency agreements | Economic proof that industry trajectory shifted | Streamlined market access and G2G equivalency (USA/Canada/South Korea/China) | 3 |
| Institutional Market Access | Public-Sector Procurement Strategy: Craft pathways for hospitals, schools, Brisbane Olympics and aged care | Government procurement frameworks and 'certified organic' tender templates | Guaranteed demand continuity; stable longterm 'baseload' income for growers | 1 |

# Outcome: Cooperative innovation

Increased access, sharing and implementation of evidence-based know-how to drive growth

Australia's organic horticulture industry has a more co-ordinated approach to extension, research capacity and knowledge sharing that fosters adoption of globally competitive best practices to drive profitability for different scales, crops, regions, climates, business models and markets.

| Strategies | Initiatives | Outputs | Impacts | Priority |
|---|---|---|---|---|
| Knowledge Sharing Platform | Prioritised business cases for RD&I initiatives | Investment-ready R&D outline proposals | Catalyse investment/co-investment | 5 |
| | Establish a smart *National Organic Knowledge System* software platform for consolidating R&D | Curated AI-powered knowledge base from accredited information sources of Australian case studies, trials, and global IP | Rapid access to best practice; reduced 'reinventing the wheel'. Benefits for all horticulture around input reductions | 4 |
| | Establish a *Network of On-Farm Trials*, participatory research and demonstration sites | Real-world evidence and practice base; facilitated farm visits | Accelerated peer-to-peer adoption of biological innovations | 3 |
| Accelerate Organic Transition | *Grower Mentorship & Incentive Program*: Link experienced producers with new/transitioning entrants; simplify process; local/state support | Structured business plans; economic benefits templates; market pathway support for 'Year 1-3' growers | Increase successful conversions of land assets; increased supply | 5 |
| Leverage Global Expertise | Global Study Tours Targeted on e.g. EU robotics, US biologicals, packaging solutions | Direct knowledge transfer and reduced "entry-risk" for new tech | Faster adoption of autonomous weeding and 'no-plastic' packaging | 4 |
| Streamline Compliance | Integrated Smart Compliance Platform to merge organic, sustainability (AASB S2) data | One-Audit digital tools; automated certification paperwork | Reduced overheads; 30% reduction in compliance time and costs | 2 |
| Standardised Benchmarking | *Outcome-Driven Soil Testing*: Develop standardised soil biological benchmarks | Single, low-cost testing protocol accepted by both retailers and certifiers | Reduce testing overheads; 40% reduction in compliance costs | 1 |
| Input & Seed Security | *Biological Input Framework*: Review national approvals (e.g. APVMA/ACO alignment) | Consolidated approvals framework for biologicals and inputs | Reduced barriers to entry for new biological products | 3 |
| | *Seed Security*: Review revision of derogation protocols; initiative domestic seed production | National seed-buying groups established | Increased productivity; viable domestic organic seed industry | 2 |
| | Determine viability of partnerships to establish domestic breeding program | Organic-relevant cultivars | Long-term cultivar security | 1 |
| Production Continuity | *Regional Supply Mapping*: Innovation in scheduling and supply chain logistics | Regional scheduling blueprints (e.g. for organic fruit & Sunraysia/Lockyer pilots) | Stabilised prices 12-month supply continuity for retail partners | 3 |
| Business Intelligence | *Outcome-driven metrics*: digital tools to collect yield and ESG data | Mapped carbon sequestration, water quality, and biodiversity metrics | Access to 'Green Finance' and premium retail shelf-space | 3 |
| | Economic study of organic production | Identification and quantification of key drivers driving profitability for successful organic horticulture businesses | Contribute to defining the organic proposition and encourage transition to organic production. | 3 |

# Outcome: Embracing technologies

Fit-for-purpose, adaptable technologies and systems

Australia's organic horticulture industry has access to cost-effective, fit-for-purpose technologies, support and systems to increase profitability, efficiency, business resilience and drive growth.

| Strategies | Initiatives | Outputs | Impacts | Priority |
|---|---|---|---|---|
| Input Sources & Support – evidence base | *Establish a Biological Efficacy Database* to match farm requirements to validated organic products | Tool to match pests/diseases with high-efficacy certified products | Reduced input costs; higher yield reliability; benefits for conventional IPM | 5 |
| | Mandate rigorous comparative studies to validate product claims for organic inputs | Verified efficacy data sets for commercial bio-stimulants and bio-pesticides | Increased grower confidence; elimination of 'snake oil' products | 4 |
| Innovation in Weed Control | Review effectiveness, entry costs and scalability for *robotics & AI* for autonomous weeding | Producer demo trials; "N. European Robotics" study tour report | 40-60% reduction in manual weeding labour; scalable for med-sized farms | 3 |
| Biosecurity Solutions | Desk study and targeted trials of Organic-Compliant Biosecurity Treatments (e.g. heat, CO2, UV) | Risk management assessment and approved organic treatment protocols | Investment to de-risk and unlock domestic and export market access | 4 |
| | Assess mechanisms for testing non-APVMA biologicals for biosecurity efficacy | Validated biological 'pathway' for biosecurity compliance | Reduced reliance on methyl bromide; leadership in 'Green Biosecurity'. | 1 |
| Biological Knowledge Base | *International Knowledge Transfer*: Adapt proven global pest/disease controls to Australia | Live 'problem-match' database and regional buying groups for biologicals | Reduced duplication of R&D; improved access to world-class biological chemistry | 3 |
| Capacity Building | Integrate *Organic Systems Training* into Sustainable Ag, DPI and corporate extension, NRM and Landcare curricula, catalysed by the National Organic Knowledge System | Accredited training modules for agronomists and corporate land managers | Unlock professional support for transitioning and certified growers | 3 |
| Enhance Traceability | Implementation of organic-specific *Digital Provenance* tracking system including certification through supply chain | Integrated 'Paddock-to-Plate' visibility; scalable to other RDC commodities | Maximise consumer trust; rapid response to biosecurity/food safety events | 4 |
| Organic Composting & Productivity | Systematic review of global composting tech and certified large-scale inputs | Shared knowledge, with best-practice composting manual for high-output horticulture | Accelerate soil performance; scalable waste-to-resource models for all horticulture | 2 |
| Global Price Intelligence | *Comparative Pricing Analysis*: Investigate price variations between AU and overseas markets | Global price-tracking dashboard and competitiveness report | Strengthened leverage in retail negotiations; export pricing strategies targeted to certified organic | 1 |