

RMCG

Exploring AI Applications for the Vegetable Industry (VG24008)

SIAP Presentation

October 2025, Brisbane

ARAIN

Certified



Corporation

Why AI and why now?

- Industry faces increasing pressures – including labour, compliance load and cost volatility
- AI can offer new ways to automate, predict and support decisions
- Key research question for the project:
“Where can AI deliver real value for vegetable growers, and what should levy investment prioritise next?”



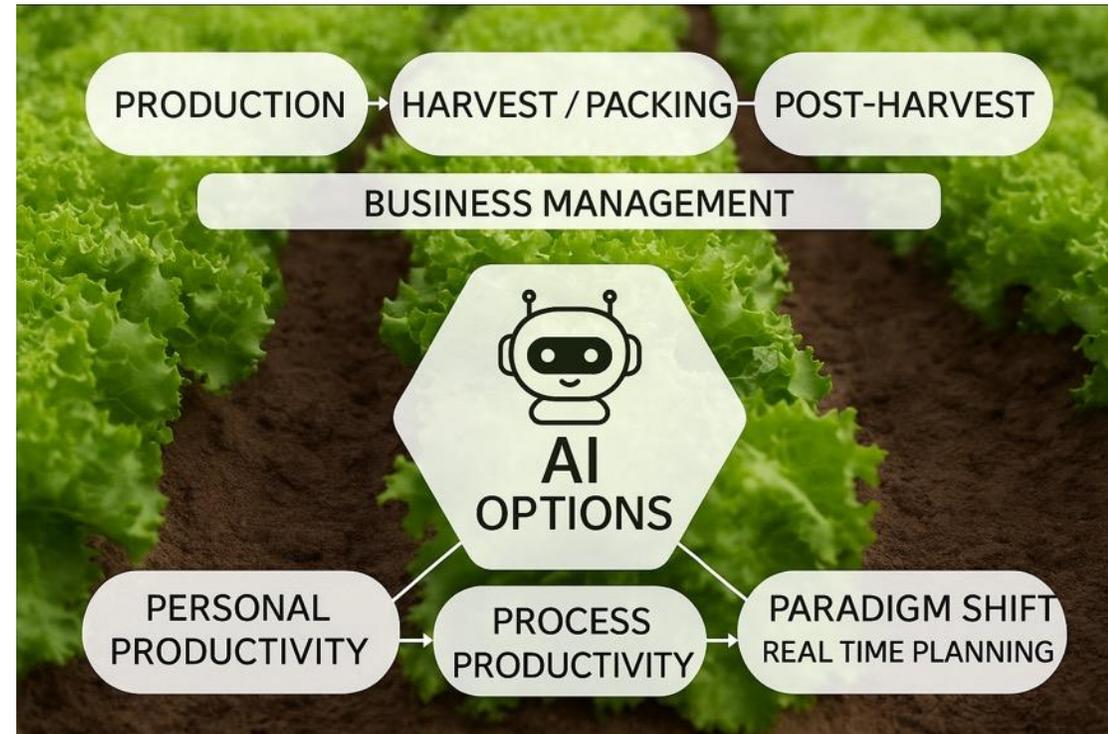
What we did?

- Delivered in partnership by RMCG and ARAIN
- Objectives:
 - Identify 3-5 high impact AI opportunities
 - Assess feasibility, readiness and value
 - Develop a roadmap for industry adoption
- SIAP discussion (Jun-25 and Oct-25)
- In person workshops in Melbourne (Vic), Manjimup (WA) and Bundaberg (Qld) + online (to come)
- >70 growers and stakeholders engaged
- Live generative AI demonstrations and grower discussions



How we did it?

- Participatory consultation with growers and supply-chain partners
- Structure followed key production stages: planning → growing → harvest/packing → business management
- Demonstrations used to reduce barriers and prompt ideas
- Insights organised across a three-horizon adoption pathways (<1 yr, 1-3 yrs, 3-5+ yrs)



What we found?

- **Low baseline awareness** – few growers currently using AI
- **High interest once exposed** – strong interest in practical, low-risk applications
- **Early traction in business management** – minutes, compliance, workforce support
- **Emerging potential in forecasting** – QA automation and crop monitoring
- **Barriers** - connectivity, cost, data trust, fragmented systems, subscription fatigue



Pathways for adoption



Immediate
(0 - 12 months)

Build confidence

- AI minutes, audit prep, multilingual inductions
- Embed AI training in VegNET Phase 4



Mid-term
(1 - 3 years)

Test & Pilot

- AI pest/disease monitoring, predictive maintenance, crop forecasting
- Grower-led innovation (e.g. Open Weed Locator)
- Invest in interoperability frameworks



Long-term
(3 - 5 + years)

Scale & Trust

- Data validation pipelines
- Advanced applications e.g. digital twins, precision robotics
- Privacy and verification guardrails

Limitations

- Focused mainly on Generative AI – did not assess all technical or commercial AI systems
- Findings reflect perceptions and interest, not active adoption
- Workshop-based insights – practical but not statistically representative
- Regional engagement nonetheless provided grounded, diverse perspectives



Preliminary Recommendations

Capacity & Confidence (now)

1. Invest in **training and extension** to build grower exposure and confidence in AI.
2. Support **peer-led demonstrations** of generative AI for business support (minutes, compliance, workforce).
3. Integrate AI into **VegNET Phase 4** to build foundational skills through training and workshops.
4. Publish a **vegetable-specific use-case and prompt library** with guardrails on privacy and scam awareness.

Applied Pilots (1 - 3 years)

5. Support **pilot projects** using AI in production (e.g. forecasting, scheduling) and business management (e.g. QA automation).
6. Expand **grower-led innovation** (e.g. OWL) to scale open-source, locally relevant solutions with consistent evaluation.
7. Test **context-engineering** approaches that adapt existing AI tools to farm-specific needs.
8. Develop **data interoperability standards** and invest in connectors to reduce subscription fatigue and build trust.

Systems & Trust (3 - 5 + years)

9. Develop **data validation and audit pipelines** to strengthen trust in AI outputs.
10. Support **advanced applications** such as digital twins, integrated forecasting, and precision robotics.
11. Embed **scam-safety, privacy, and verification guardrails** in all industry-facing tools and training.
12. Ensure **scalability and flexibility** through interoperability and context-engineering so tools can be tailored to business needs.

Next steps

- **Online AI session** – pivot online session deliverable to training in lieu of information gathering; test findings by showcasing practical generative AI tools
- **Discovery voice agent** – launch interactive voice tool to gather broader industry feedback and raise awareness
- **Validation & feasibility** – complete feasibility analysis to confirm practicality and investment readiness
- **Final report** – deliver validated findings and investment recommendations in final report



Discussion questions

- What are your initial thoughts on the approach and findings presented?
- Which of the proposed opportunities do you see as most compelling from an investment perspective?
- Are there particular outcomes or metrics you would want to see before committing to investment?
- Are there any emerging opportunities not captured in this roadmap that you believe we should be monitoring or considering for integration?



Thank you

RMCG

