## CES 2025: Study Tour to investigate emerging technologies relevant to NZ Agriculture.

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Gavin McEwen, CEO FARMIQ SYSTEMS LIMITED LinkedIn

**Executive Summary** 

## **Executive Summary:**

CES 2025<sup>1</sup> and what it tells us about the future of technology in New Zealand Agriculture

This report summarises key findings from CES 2025 through the lens of the New Zealand agricultural sector, examining how global technology trends can inform strategy, investment, and innovation domestically.

Technologies once considered emerging—such as AI, robotics, precision automation, and digital traceability—are now widely deployable and central to agri-food systems. This marks a shift from incremental improvements to structural transformation in digital agriculture.

These advancements are now actionable and New Zealand, with its high-integrity food brand and climate-aware producers, is well positioned to lead. This report assesses 26 cross-sector technologies with immediate and long-term opportunities across areas including autonomous vehicles, energy self-sufficiency, sustainable biomanufacturing, personalised nutrition, and Indigenous data sovereignty.

This report distils CES insights into five priority technology domains for New Zealand agriculture:

- 1. Energy, Autonomy & Electrification
- 2. Climate & Ecosystem Intelligence
- 3. Biological & Digital Inputs
- 4. Transparent Supply Chains
- 5. Farmer-Centric Generative Al

To capitalise on these, the report outlines a set of policy enablers, R&D pathways, and sectoral recommendations, with specific consideration for Māori agribusiness aspirations.

Engaging with CES 2025 insights allows New Zealand agriculture to:

- Secure a competitive edge by adopting cutting-edge technologies early
- Future-proof value chains through sustainable and efficient practices
- Strengthen market position as a trusted supplier of high-value, sustainable food and fibre

By systematically integrating these innovations, New Zealand can enhance its agricultural sector's resilience, productivity, and global competitiveness.

The CES event reinforces the view that agriculture is no longer insulated from technological disruption—it is central to it. With early engagement and collaborative system design, New Zealand can be positioned as a global exemplar of digitally enabled, climate-smart agriculture.



Figure 1 - Strategy flow from CES technology trends to on-farm application in the New Zealand context.

## <sup>1</sup>What is CES?

The **Consumer Electronics Show (CES)** is the world's largest and most influential technology trade show, held annually in **Las Vegas, USA**. Organised by the **Consumer Technology Association (CTA)**, CES serves as the global stage for innovation—where the latest in consumer and industrial technologies are unveiled, ranging from artificial intelligence and robotics to smart cities, biotechnology, automotive tech, and digital health.

After 58 years CES has evolved into a **multi-sector global innovation summit**, reflecting the convergence of digital, physical, and biological technologies.

CES is not limited to consumer gadgets; it has become a launchpad for **transformational technologies** across all sectors, including energy, mobility, agriculture, manufacturing, and sustainability. It is where startups, major multinationals, and research institutions come together to demonstrate how emerging tech is shaping the future.