

# The U.S.-Australia Strategic Innovation Alliance

## Precision Agriculture in Australia Factsheet

### Overview

Australian agriculture represents 55 percent of national land use, with 426 million hectares under cultivation as of December 2023. The sector generated an estimated \$46.2 billion in exports in the 2023–24 period, underscoring its importance to the national economy.<sup>1</sup>

In 2025, precision agriculture has become a defining feature of Australia’s approach to farming, reflecting a shift toward data-driven, technology-enabled practices that seek to optimize productivity, sustainability, and resource management. The sector’s growth is being propelled by the need to address water scarcity, labor shortages, and climate variability, as well as by government policies that support technological innovation and sustainable development.

### Market Size and Growth

The Australian precision agriculture market reached a value of 261 million U.S. dollars in 2024. It is projected to grow at a compound annual growth rate of 9.1 percent, reaching 623.5 million U.S. dollars by 2033. This expansion is underpinned by rising adoption of Internet of Things (IoT) technologies, artificial intelligence, and drone-based solutions, all of which are enhancing farm efficiency and enabling more precise management of inputs such as water, fertilizers, and pesticides.<sup>2</sup>

### Technology Adoption and Applications

The uptake of precision agriculture technologies is widespread and accelerating. In 2025, 85 percent of cropping farms in Australia practice stubble retention, a technique that conserves soil moisture and reduces erosion, while 61 percent of livestock farms are using innovative grazing methods to optimize pasture use and animal health.<sup>3</sup>

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<sup>1</sup> Department of Agriculture, Fisheries and Forestry, “Snapshot of Australian Agriculture 2025,” May 2, 2025.

<sup>2</sup> IMARC Group, “Australia Precision Agriculture Market Size | Outlook 2033,” February 24, 2025.

<sup>3</sup> IMARC Group, “Australia Precision Agriculture Market Size | Outlook 2033,” February 24, 2025.

Farmers are increasingly utilizing connected technologies such as soil moisture sensors, GPS-enabled equipment, and automated irrigation systems. These tools allow for real-time data collection and analysis, supporting precision application of water and agrochemicals. In drought-prone regions, where water is a critical and limited resource, such innovations are especially valuable.<sup>4</sup>

Artificial intelligence and machine learning are being integrated into farm management platforms to provide predictive analytics. These systems help farmers anticipate changes in weather, detect pest outbreaks, and make informed decisions about planting, irrigation, and harvesting. Companies such as Rubicon Water and The Yield are providing advanced solutions for water management and data-driven decision-making.<sup>5</sup>

Drone technology is also gaining traction, with the Australian agriculture drone market expected to reach 499 million U.S. dollars by 2033. Drones are used for crop monitoring, spraying, and mapping, offering high-resolution data that supports targeted interventions and reduces input waste.<sup>6</sup>

## Government Support and Policy

Government programs play a significant role in fostering the adoption of precision agriculture across Australia. For example, the Smart Farms Program provides financial incentives and grants to farmers adopting advanced technologies such as GPS-guided machinery, soil moisture sensors, and drone monitoring. The Australian Centre for International Agricultural Research (ACIAR) funds collaborative research projects that develop data-driven farming practices to improve yield and sustainability.

Additionally, the Digital Agriculture Services Cooperative Research Centre (DAS CRC) is driving innovation by developing precision ag tools and digital platforms tailored to Australian conditions. The government's focus on sustainability and climate resilience is also reflected in investments in rural digital infrastructure through the Regional Connectivity Program, enabling farmers in remote areas to access real-time data and analytics. These initiatives support agritech startups and research collaborations that help farmers optimize resource use, reduce environmental impact, and enhance productivity.

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<sup>4</sup> IMARC Group, "Australia Precision Agriculture Market Size | Outlook 2033," February 24, 2025.

<sup>5</sup> Coherent Market Insights, "Australia Precision Farming Market Trends," May 28, 2025.

<sup>6</sup> IMARC Group, "Australia Agriculture Drones Market Growth, Industry Analysis 2025," April 30, 2025.

## Market Segmentation and Industry Players

The precision agriculture market in Australia is segmented into hardware, software, and services. Hardware remains the largest segment, accounting for over 55 percent of market revenue in 2024, driven by demand for sensors, drones, and automated machinery. Software is the fastest-growing segment, reflecting the increasing importance of data analytics, farm management platforms, and AI-based advisory systems.<sup>7</sup>

Key players in the market include global companies such as John Deere, Trimble Inc., AG Leader Technology, CNH Industrial, and Topcon Positioning Systems, as well as Australian innovators like Rubicon Water and The Yield.<sup>8</sup>

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<sup>7</sup> Grand View Research, "Australia Precision Farming Market Size & Outlook, 2030," December 16, 2022.

<sup>8</sup> Coherent Market Insights, "Australia Precision Farming Market Trends," May 28, 2025.