
National Innovation Review & Strategy of Precision Agriculture Systems: Research, Development & Extension

Terms of Reference

National University Network for Precision Agriculture Systems

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The Australian agricultural sector has an opportunity to enhance its place as a leader in the delivery of competitively priced food and high-end differentiated products that command a premium price in the global market. To compete in the global market Australian agricultural enterprises must reduce the cost of production to increase profitability and productivity against the backdrop of an ageing farmer population, labour shortages, increasing compliance requirements, climate change variability, rising costs and falling commodity prices in relative terms. Precision Agriculture (PA) offers the opportunity to significantly enhance the profitability and productivity of the Australian agricultural sector. Through the development and adoption of enabling technologies farmers and agribusiness professionals can increase profitability and productivity across the agricultural value chain while at the same time meeting ever increasing social, environmental and economic compliance requirements.

In response to the challenges faced by the Australian agricultural sector nine Australian universities have come together to form the National University Network of Precision Agriculture Systems (NUNPAS). NUNPAS has recognised a need to develop a National agenda and collaborative framework for the successful realisation of PA in Australian agriculture. The National agenda needs to be properly informed through a comprehensive review of PA and a well-developed strategy. Working closely with Universities, the relevant Research and Development Corporations (RDCs), Industry and state and federal agencies including CSIRO, NUNPAS is undertaking the development of a "National Innovation Review & Strategy of Precision Agriculture Systems: Research, Development and Extension" with terms of reference that will address:

1. The promise of Precision Agriculture Systems

- Define precision agriculture; and
- State a vision for precision agriculture and its potential role in profitability, sustainability and competitiveness of Australian agriculture.

2. Pathways to successful precision agriculture adoption

- Review technology adoption across various agriculture sectors;
- Review the current stakeholder base including RDC's, Universities, Industry state and federal agencies, including their capabilities, research, development and extension (RD&E) programs;
- Review barriers, risks and opportunities for precision agriculture in Australia including socio-economic, infrastructure, technology and other issues that may be significant in determining greater adoption; and
- Understand the systemic enablers and constraints to creating value from precision technologies;
- Undertake a desktop study to identify relevant available technologies from other countries that will potentially make R&D in Australia unnecessary.

3. Realisation of a National PA agenda

- Identify key roles and responsibilities of institutions; industry; research; government and end-users to address the major barriers, risks and opportunities;
 - Recommend possible models for developing and implementing extension programs;
 - Recommend a collaborative framework for pursuing a National precision agriculture RD&E agenda; and
 - Develop a RD&E Precision Agriculture Plan.
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