



Australian Government
Australian Pesticides and
Veterinary Medicines Authority

EPAC 2026



Advancing Sustainability in Agriculture: Enabling Precision Application of Crop Protection Products by Inclusion in Regulatory Approaches (Processes)' <https://www.epac2026.org/>

Hugh Dawick (APVMA) /
Sarah Hovinga (Bayer CropScience)

WPP update - 27 February 2026

Definitions

Precision application

Application of plant protection products based on site specific information leading to the decision to undertake a Site-Specific Application and subsequent execution of that decision, at either constant or variable application rate. (EUPAF glossary)

Targeted application

An application method linked to a prescription, scouting and/or sensing result, including real-time (e.g. while the application is in progress), which improves delivery of a pesticide(s) to target the intended pest (e.g. weed, insect, fungus, etc.) in small or irregular areas within a larger use area. (PPDC – EATWG 2022-2023 Final Report)

Aim and outcomes

To build on work already undertaken facilitating our understanding of precision application technologies and the importance of including these in regulatory processes

Update to OECD WPP meeting 27 February 2026 and posting of recorded presentations to EPAC / APVMA websites

The recommendations arising from this conference will be provided to OECD CRP in a conference report

Publication of 'perspectives paper' ASABE journal 2026/27

Conference details

- Melbourne Convention and Exhibition Centre
- 19 – 20 February 2026
- 185 delegates (virtual and in person)
- Format
 - Day 1 Presentations (18 speakers)
 - Day 2 Workshop (4 Topics / 12 questions)
 - <https://www.epac2026.org/program>
- Outputs
 - Recorded presentations
 - Slido responses - workshop



Thanks to our Sponsors

MAIN CONFERENCE SPONSOR



GOLD SPONSOR



SILVER SPONSORS



CRDC
COTTON RESEARCH AND
DEVELOPMENT CORPORATION

CropLife
Australia



GRDC
GRAINS RESEARCH
& DEVELOPMENT
CORPORATION

BRONZE SPONSOR



COFFEE CART & LANYARD SPONSOR



SESSION SPONSORS



AERIAL
APPLICATION
ASSOCIATION
AUSTRALIA



WORKSHOP SPONSOR

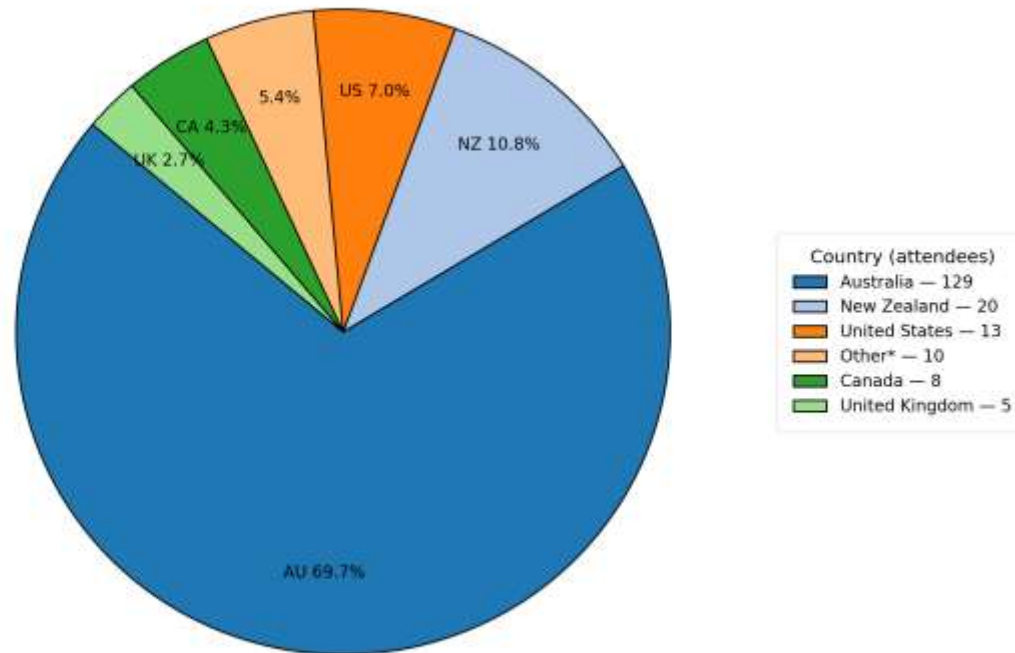


Crop-Protection-Products-&
Regulation | 19-20 February 2026 |
Evaluation questionnaire

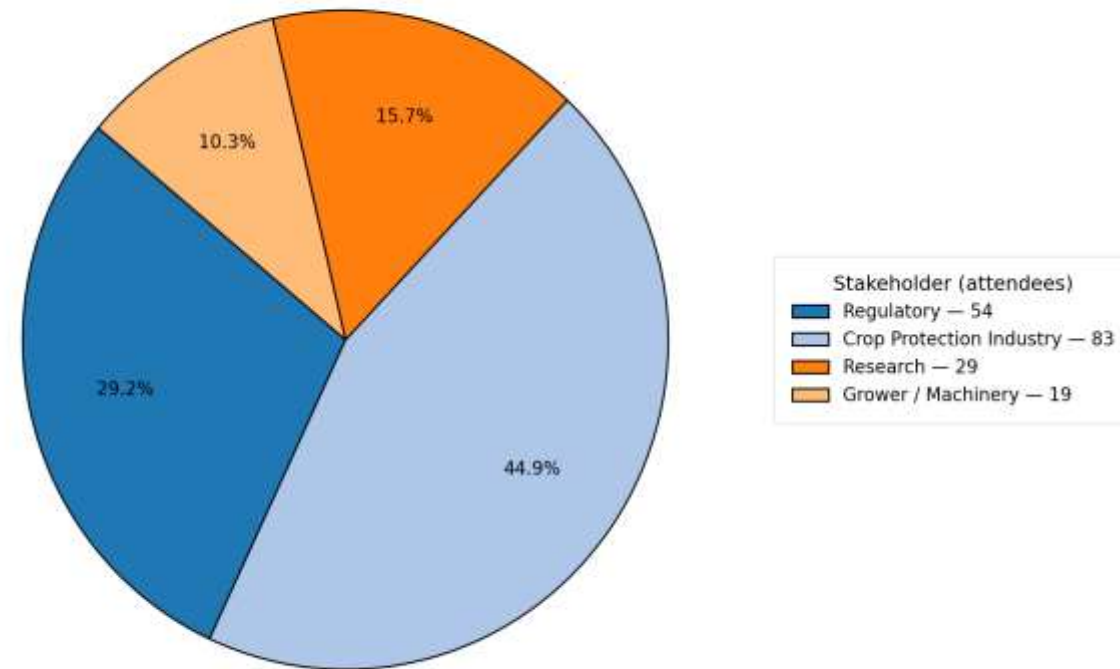


Attendees (Country / Stakeholder)

Attendees by Country



Attendees by Stakeholder Group



*Other includes: Singapore (2), Germany (2), Belgium (1), Spain (1), Switzerland (1), South Korea (1), Italy (1), Brazil (1)

Day 1 - Presentations

Introduction (OECD CRP) - Andy Sheppard

Introduction (APVMA) - Hugh Dawick

Regulatory (EFSA) - Domenica Auteri

Thoughts on how to include pesticide precision application techniques in European regulatory risk assessment

Regulatory (UK CRD) - Anthony Wilson

Practical experience in developing a regulatory approach to support the implementation of precision applications with drones

Regulatory (PMRA) - Ross Breckels

Drone application in Canada – gaps and opportunities

Crop protection industry (Corteva Agriscience) - Anne Alix

Precision application of pesticides in agriculture: update of the European Precision Application Task Force (EUPAF) for field crops

Crop protection industry (Corteva - UPASTF) - Travis Bul

Industry efforts to support UAV-based pesticide applications: Overview of the Unmanned Aerial Pesticide Application System Task Force (UPASTF)

Crop protection industry (Bayer Crop Science) - Sarah Hovinga

Digital labeling in the context of precision and site-specific application

Crop protection industry (Bayer Crop Science) - Marcelo Nishikawa

Application Technology: a crop protection manufacturer perspective and biological product use case

Crop protection industry (Nufarm) - David Keetch

"Green-on-Green" technology and precision application in Australian broadacre cropping systems

Grower / machinery (John Deere/AEM) - Adam Barlow

Targeted Application Technologies: U.S. Developments in Standardized Performance and ISO Alignment

Grower / machinery (Koolpari Enterprises) - Broden Holland

Growers' perspective on precision agriculture in Australia

Grower / machinery (Practitioner and Expert) - Matthew Strmiska

People, incentives, outcomes: working the value chain for adoption

Grower / machinery (Blue River) - Jesaelen Gizotti de Moraes

Overview of See & Spray Technology

Research (USDA-ARS) - Heping Zhu

Overview – State of the Science for Targeted Precision Application

Research (Universitat Politècnica de Catalunya) - Emilio Gil

Precise spray application versus regulatory needs. Technology grows faster than legislation

Research (Agroscope) - Joshua Witsoe

Spot spraying robots in vegetable row crops: Mitigating the environmental exposure of pesticides with targeted applications

Research (Chonnam National University) - Se-Woon Hong

Precision application and drone adoption in Korea: Current status and challenges

Research (Purdue University) - Bernie Engel

A Runoff-Based Modeling Framework for Assessing Spot Agrochemical Applications

Research (Julius Kühn Institute) - Jens Karl Wegener

From Drift to Decision-Making – Why Testing and Regulatory Frameworks Must Evolve with Application Technology

Day 2 - Workshop

Topic 1: Definitions, classifications and use patterns

Chairs: Adam Barlow and Greg Watson

- 1) Definitions and classification groups are being discussed and developed by ISO, ASABE, EPPO and EUPAF. How do these classifications assist in reflecting PA in risk assessments & language on product labels?
- 2) What ways are there to categorise precision applications that would allow more efficient regulatory review of precision application?
- 3) The use of PA will vary according to product type (biologicals, herbicides, fungicides, etc.) what are the different considerations based on product type. In particular, how can PA enhance the use of biologicals to maximise their efficacy (e.g. very early pest detection and intervention)?

Topic 2: Building trust in the technology

Chairs: Emilio Gil and Bartley Bauer

- 1) PA involves 3 components - detection - decision - execution. Where is more trust needed in the technology so all stakeholders can feel comfortable with real-time, flexible, applications?
- 2) What needs to be in place to ensure PA technologies / practices meet regulatory agency environmental and human protection goals and potentially accepted by regulators as risk mitigation options?
- 3) What needs to be in place to ensure PA technologies support authorities monitoring compliance (e.g. record keeping requirements and enforcement investigations)?

Topic 3: Risk assessment approaches and identifying / addressing regulatory gaps

Chairs: David Keetch and Dan Poflowski

- 1) What are the major use patterns involving the use of PA that the crop protection industry plan to submit to regulators in the next 5-10 years?
- 2) EUPAF TG1 and EUPAF TG 3&4 papers provide a good starting point in setting out PA risk assessment approaches for human health, residues and environmental assessment. What are the key gaps for site-specific exposure / risk assessment? What changes in processes, study protocols and/or regulatory data requirements are needed?
- 3) Considering the above what are the initial / low risk steps that regulatory agencies could take to enable introduction of PA (e.g. spray drift management and/or other risk management / risk mitigation options?)

Topic 4: Label language & supporting precision application

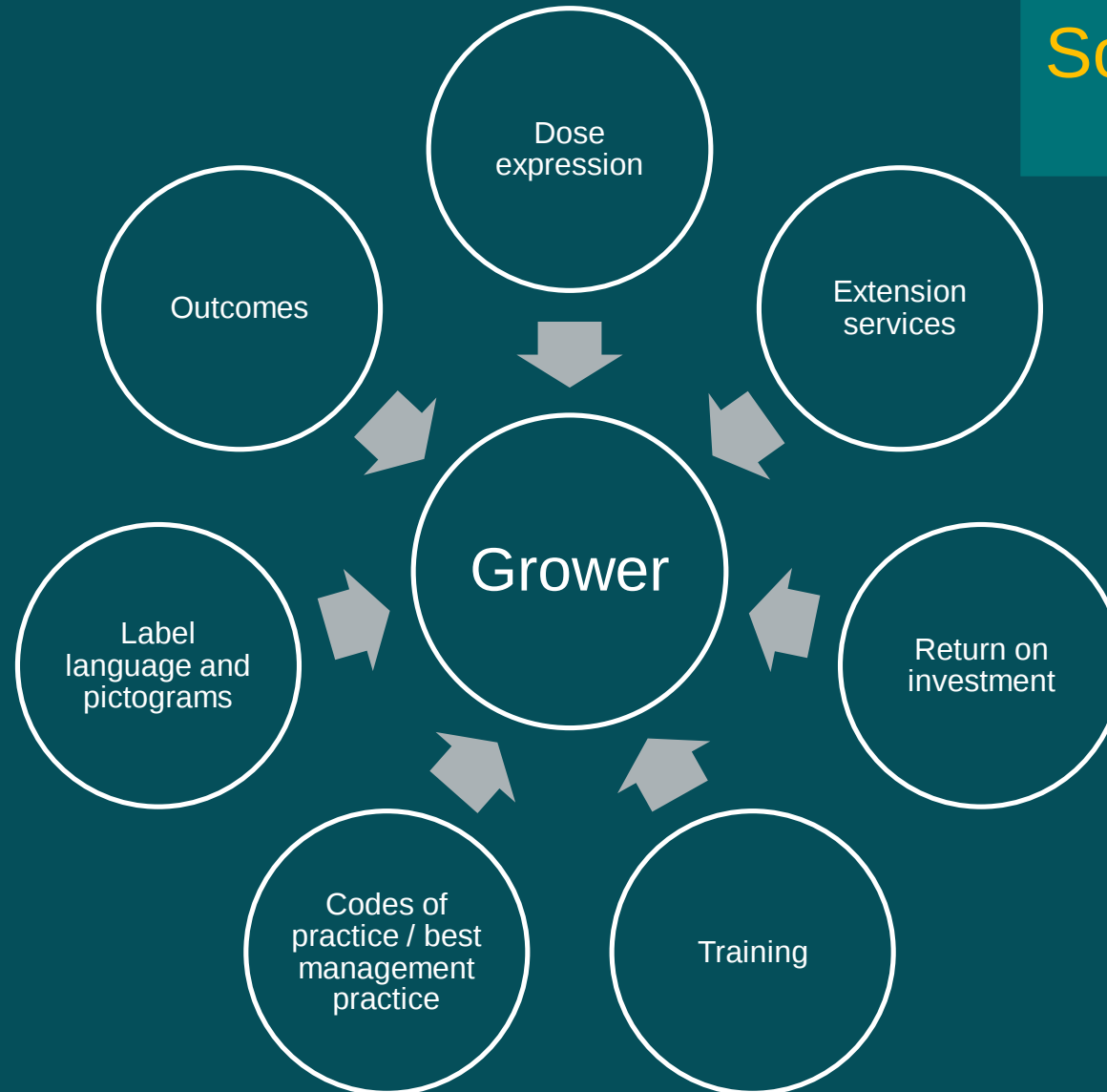
Chairs: Sarah Hovinga and Ross Breckels

- 1) How does PA fit within regulatory protection goals, sustainability goals for agriculture and the need for grower profitability? How can registrants, equipment manufacturers, regulatory agencies, academia, and extension groups incentivize growers to adopt PA technologies?
- 2) Are there existing examples of labels and/or regulatory approaches already being used for PA?
- 3) How could labels and/or regulatory approaches be updated to reflect PA language/abilities including dose expression, use reduction, and performance classification?

Over 500 responses
to analyse and
summarise



Some key themes



Grower themes expanded

Dose expression

- Likely to be reluctance and confusion moving away from rate/ha for 2D crops. Perhaps more flexibility with 3D crops with LAI or similar approach.

Extension services

- Growers need support to navigate their way through the plethora of information and services (which app, which sprayer, which digital platform?)

Return on investment

- Growers need to understand what the return on investment will be and over how long. Use of premium products would be acceptable if optimal control and long-term seedbed reduction is achieved even at the expense of some localised crop damage.

Training

- Minimum training standards are not sufficient for PA systems. Possible solution could be the development of training apps and simulators that can be easier accessed and updated.

Grower themes expanded

C

Codes of practice / best management practice

- As identified by the Drone WG, codes of practice or best management practice guidance (for PA) is needed so all can understand what best practice looks like. It supports training and enforcement activities and can provide a level of information that can't easily appear on the label.

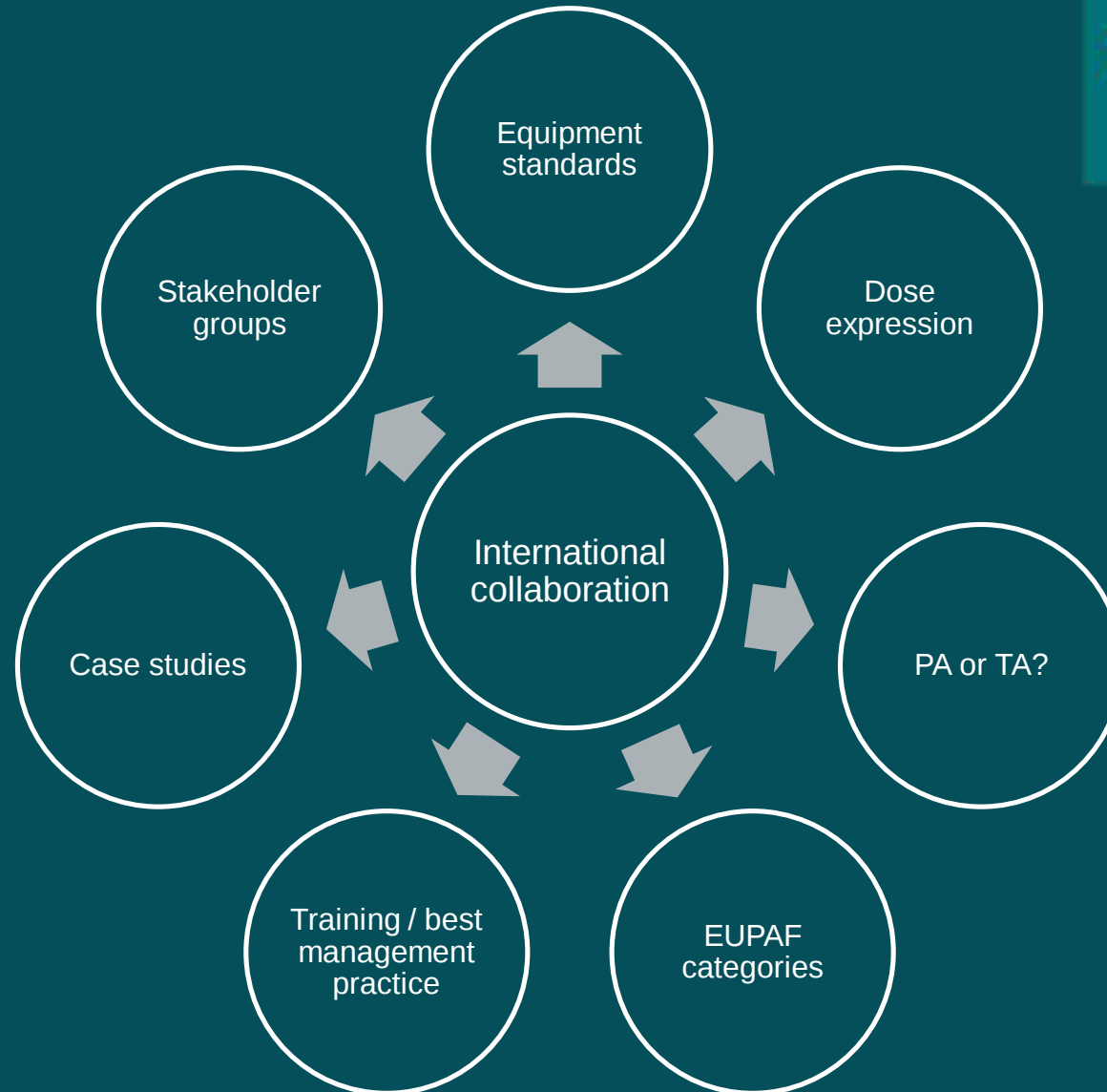
Label language and pictograms

- Labels are already complicated and the added complexity of PA could make this worse. Simplicity is key on a physical label and initiatives towards digital labelling are critical to improving accessibility and readability of information. Digital technologies utilized in the submission steps, could also potentially simplify addition of precision label language in a way that reduced the risk of “opening up the whole label” for registrants. The pictograms developed by EUPAF for 2D and 3D crops were considered very useful to aide understanding of type of PA intended but would need to be harmonised.

Outcomes

- The majority of what is applied to a crop never hits the intended target and better tech alone is not enough. Regulation that makes it easier for cheap generic products to enter the market can lead to poor outcomes. Less than optimal coverage can lead to resistance and undesirable impacts on the environment (contaminated water, degraded soils, lost beneficials, etc). Growers need to see what coverage is currently being achieved and what could be achieved such that behaviours change towards maximising coverage thereby improving outcomes.

Some key themes



Collaboration themes expanded

Equipment standards

- The development of ASABE standard S665 and related ISO standards is an important foundation for regulatory confidence and risk assessment assumptions relating to the performance of PA.

Dose expression

- The digital labels initiative is the most likely route to a harmonised approach to dose expression.

PA or TA?

- A global harmonised approach to terminology and consensus on acronyms and definitions is necessary including reference to precision and/or targeted application.

EUPAF categories

- The proposed use reduction classification system from EUPAF is a good foundation for a common understanding of the range of PA equipment/techniques and associated dose reduction but wider international agreement and validation are required.

Collaboration themes expanded

c

Training and best management practice

- Internationally agreed best management practice and training support tools would be key in supporting regulatory confidence and grower understanding and compliance with label requirements.

Case studies

- The development of a 'pool' of case studies based on the most likely and imminent scenarios for PA in different jurisdictions would help regulators identify key issues and risk assessment approaches.

Stakeholder groups

- A key message from conference is the need to have all stakeholder groups involved in the discussions and development of regulatory approaches to PA (e.g. state and federal regulators, crop protection industry, growers, equipment manufacturers, academia and research).

Thank you and happy to take
questions

