



DIE AKADEMIE
FRESENIUS

Where Experts Meet!

International Akademie Fresenius Conference

Digital Agriculture

Regulatory and Scientific Aspects of Precision Application

+++ HYBRID EDITION +++

**28 and 29 October 2025
in Dusseldorf and
via Live Stream**

Regulatory Status

- Update from the EU Commission: The inclusion of precision applications in the regulatory system
- HSE (UK): Drone technology update – risk assessment in the context of pesticide application
- International perspective – navigating U.S. regulatory pathways
- The European Precision Application Task Force (EUPAF) on precision application and the GAP table
- Implications for risk mitigation and assessment

Technologies and Equipment

- Industry Outlook on Targeted Application
- AI in Digital Agriculture

Field Trials

- Precision application in 3D: Matching technological progress with regulatory needs

Research and Academia

- The potential of spatially explicit mechanistic effect models



The Experts

Anne Alix Corteva Agriscience | **Martin Atzmüller** University of Osnabrück |
Adam Barlow John Deere | **Travis Bui** Corteva Agriscience/ Unmanned
Aerial Pesticide Application Task Force (UAPASTF) | **Sébastien Codis**
French Wine and Vine Institute (IFV) | **Joachim Dressel** Syngenta | **Dirk de**
Hoog Wageningen University and Research | **Andreas Focks** University
of Osnabrück | **Emilio Gil** Politechnic University of Catalonia | **Bernhard**
Gottesbüren Make-Sense Consulting | **Peter Hloben** European Agriculture
and Machinery Association (CEMA)/ John Deere | **Jaco Kole** Fedecom |
Grant Stark The Chemicals Regulation Division (CRD)/ Health & Safety
Executive (HSE) | **Jorge Olivares Rivas** knoell Germany | **Jens Karl Wegener**
Julius Kühn Institute (JKI)

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Morning Session | 09:00 – 13:10 CET

08:45 On-site registration & opening of the virtual meeting room
09:00 Welcome address by the organisers and the chair
Anne Alix, Corteva Agriscience, United Kingdom

Regulatory Status

09:10 **European Precision Application Task Force (EUPAF) Update on Current Activities**
Anne Alix, Corteva Agriscience, United Kingdom

09:45 **Update on the Inclusion of Precision Application in the Regulatory System**
Representative of the European Commission, Belgium
(virtual presentation)

10:20 **Precision Application in the GAP table: EUPAF GAP-Handbook and Glossary of Terms**

- The precision application GAP-Handbook:
- The EUPAF glossary of precision application terms
- Future plans: Alignment of EUPAF- and EPPO-terminology; Adjustment of EUPAF GAP for GAP data models (e.g. IUCLID, Agriguide, etc.)

Joachim Dressel Syngenta, Switzerland

10:55 Coffee break

11:25 **Precision Application: Implications for Risk Mitigation and Assessment**
Bernhard Gottesbüren, Make-Sense Consulting, Germany

12:00 **Update: Drone Technology and Assessing the Risks from Pesticide Application**

- General overview
- Drones in the UK and the EU
- The OECD-level discussions on drones

Grant Stark, The Chemicals Regulation Division (CRD)/ Health & Safety Executive (HSE), United Kingdom

12:35 **Unmanned Aerial Pesticide Application Task Force (UAPASTF): Enabling Crop Protection Applications by Unmanned Aerial Vehicles (UAV)**

- Formed in response to OECD recommendations on drone-based pesticide application, as outlined in a "State of Knowledge" 2021 publication
- Primary Goals: Generate regulatory data on drift, operator exposure, and crop residues for UAVs
- Update on UAPASTF activities, incl. 2023/2024 GLP field trials and drone vs. conventional drift comparison

Travis Bui, Corteva Agriscience/ Unmanned Aerial Pesticide Application Task Force (UAPASTF), United States of America
(virtual presentation)

13:10 Lunch break

Afternoon Session | 14:10 – 17:55 CET

14:10 **Advancing Precision Application: Navigating U.S. Regulatory Pathways**

- Innovating with John Deere See & Spray™: A technology overview
- Precision application today: Insights into the U.S. regulatory landscape
- Enabling innovation: The role of standards in modern application methods

Adam Barlow, John Deere, United States of America
(virtual presentation)

14:45 **Notions from the Dutch Targeted Application, Spray Technology and Authorisation Working Group**

- Technical equipment and requirements
- Possible ways to reflect technical progress in risk assessment and authorisation
- Supervision and enforcement

Jaco Kole, Fedecom, The Netherlands

15:20 Coffee break

Technologies and Equipment

15:50 **Agricultural Machinery Industry Outlook on Targeted Application**

- Update from EUPAF TG 1 group – where are we?
- State of the art – Field crop sprayers (2D)
- Update the ISO working group – Standard for Spot sprayers
- Equivalency issue: Spot vs. broadcast application
- How to support on-site risk mitigation – Infestation prediction

Peter Hloben, European Agriculture and Machinery Association (CEMA)/ John Deere, Germany

16:25 **Overview of Autonomous Spraying Systems and their Requirements for Practical Use**

- Applications of autonomous spraying systems
- Overview: Different autonomous spraying systems
- Additional requirements for autonomous systems for discussion
 - a) to fulfil ISO 16119
 - b) to achieve good agricultural practice
 - c) to be manageable for farmers

Jens Karl Wegener, Julius Kühn-Institute, Germany

 **Book now**



17:20 AI in Digital Agriculture: Intelligent Sensing and Application

Martin Atzmüller, University of Osnabrück, Germany

17:55 End of the first day

19:00 Evening event



After the first conference day you are most welcome to attend our evening event for an unhurried evening of good food and leisure time. Please, join us to continue the day's interesting discussions in a relaxed and comfortable atmosphere.

Timings are in
Central European Time CET.

Wednesday, 29 October 2025

Morning Session | 09:15 – 13:15 CET

09:15 Brief address by the Chair

Anne Alix, Corteva Agriscience, United Kingdom

Research and Academia

09:20 The Potential of Spatially Explicit Mechanistic Effect Models (MEMs) for Assessing the Impact of Precision Applications on the Risk of Plant Protection Products (PPPs)

- MEMs are well-established for evaluating PPP risks to non-target organisms, but rarely used for precision applications
- First applications show an impact of spatially heterogeneous application patterns on the estimated risk for small mammals

Andreas Focks, University of Osnabrück, Germany

09:55 Deposition and Emission of a Spot Spray Application – Insights from the Agros II Project Outline

- Effect of spray application technology and user settings on spray deposition
- Impact of weed/disease pressure
- Spray drift of a spot spray application

Dirk de Hoog, Wageningen University and Research, The Netherlands

10:30 Coffee break

11:00 Simulation of Run-off Exposure from Precision Application by Mechanistic Modelling with SPOTMOD

- Brief description of the model setup and development
- Why a metamodel was created and which simulations were used for it
- Identification of the end user and how the model can align with current regulatory processes

Jorge Olivares Rivas, knoell, Germany

Field Trials

11:35 Part 1: Evaluating Spraying Performance in 3D crops and Dose Reduction Opportunities

- The EvaSprayViti test bench – viticulture spraying techniques under controlled conditions
- Overview: Various spraying technologies in viticulture and their potential for dose reduction
- The French PerformancePulvé initiative: A classification system for sprayers based on evaluations conducted on the EvaSprayViti test bench

Part 2: Comparison of Application Techniques in Terms of Drift Mitigation Potential

- The EoleDrift test bench – drift measurements under semi-controlled conditions
- A new drift measurement protocol developed in collaboration with ANSES (CAPRIV project)
- Classification of applications techniques
- Evaluation: Physical barriers performance in spray drift reduction/operator/bystander exposure

Sébastien Codis, French Wine and Vine Institute (IFV), France

12:25 From Compliance to Precision: Integrating Legislation and Technology in Crop Protection

- Overview of key legislation and policy drivers
- Field-level challenges: Dosage accuracy, buffer zones, drift control
- Cutting-edge technologies transforming crop protection
- Artificial intelligence for compliance and risk reduction

Emilio Gil, Polytechnic University of Catalonia (UPC), Spain

13:00 Final discussion and closing remarks

13:15 Lunch and end of the conference

On-site and in person or digitally via our Live Stream – the choice is yours!

Connect with your colleagues, clients and partners, network with old and new acquaintances – and just enjoy the on-site event in Düsseldorf.

Should you have missed the opportunity to secure one of our on-site places – or prefer not to travel, you can follow the contributions and discussions from the location of your choice: Via our Live Stream!

 **Book now**



Information available online at: www.akademie-fresenius.com/digitalagriculture

Registration

By web www.akademie-fresenius.com/digitalagriculture
By email registration@akademie-fresenius.com

€ 1,995.00 plus VAT on-site in Dusseldorf

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€ 1,195.00 plus VAT Live Stream

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Hotline +49 231 75896-50
Die Akademie Fresenius GmbH
Alter Hellweg 46, 44379 Dortmund



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Do you have any questions?



Anne Möller
Phone: +49 231 75896-84
amoeller@akademie-fresenius.de

The Organisers

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Who should take part?

Groups that should take part:

- ✓ Managing directors, managers, consultants and scientists working in the field of plant protection products and active substances
- ✓ Technical experts from research & development
- ✓ Agricultural technology experts
- ✓ Producers, distributors and downstream users of plant protection products
- ✓ Risk assessors, toxicologists, ecotoxicologists, product stewards, regulators

Sectors that should take part:

- ✓ Agrochemical industry, agro-technological industry
- ✓ Biotech industry, research institutes, authorities
- ✓ Professional associations, contract laboratories/consultancies

Conference Venue

Novotel Düsseldorf City West
Niederkasseler Lohweg 179, 40547 Düsseldorf
Phone : +49 211 52060-0
Email: h3279@accor.com
<https://all.accor.com>

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Group Reductions: For joint bookings received from one company we grant a 15% discount from the third participant onwards.

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