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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 | **Alexander Pfaff** German Federal Office of Consumer Protection and Food Safety (BVL) | **Jonas Schartner** German Federal Office of Consumer Protection and Food Safety (BVL) | **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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# Tuesday, 28 October 2025



## 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 chairs**

Anne Alix, Corteva Agriscience, United Kingdom

Jonas Schartner, Federal Office of Consumer Protection and Food Safety (BVL), Germany

## Regulatory Status

**09:10 European Precision Application Task Force (EUPAF) Update on Current Activities**

Anne Alix and Jonas Schartner

**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.)

Alexander Pfaff, German Federal Office of Consumer Protection and Food Safety (BVL), Germany

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

Timings are in  
Central European Time CET.

- 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

**13:10 Lunch**



## Afternoon Session | 14:10 – 17:35 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

**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

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

Martin Atzmüller, University of Osnabrück, Germany

17:35 End of the first day

18:30 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 Chairs

Anne Alix, Corteva Agriscience, United Kingdom  
Jonas Schartner, German Federal Office of Consumer Protection and Food Safety (BVL), Germany

## 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!

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By email [registration@akademie-fresenius.com](mailto:registration@akademie-fresenius.com)

## € 1,995.00 plus VAT on-site in Dusseldorf

Representatives of an authority or a public university are eligible for a reduced fee of € 895.00 plus VAT per person (please provide evidence). The reduced fee cannot be combined with other rebates.

Limited places available with a special fee of €200 + VAT for pertinent competent authorities.

## € 1,195.00 plus VAT Live Stream

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## Do you have any questions?



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## The Organisers

For 30 years, Akademie Fresenius has been your partner for practice-oriented training on all the latest topics surrounding the safety and quality of food, consumer goods and chemical products along the whole production chain. Our portfolio not only includes international conferences but also offers national trade meetings, intensive practical seminars and training in small work groups.

Our events are designed to promote an active exchange amongst our participants and offer the perfect platform for bringing the industry, the scientific sector, the authorities and the consulting field together. Excellent service, all-inclusive. Our wide-ranging advanced training opportunities contribute to giving our customers the competitive edge in all quality assurance, risk assessment, legal, production and technical questions.

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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](mailto:h3279@accor.com)  
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We have reserved a limited number of rooms for our participants at reduced rates at the hotel. These rooms can be booked up to four weeks prior to the start of the event. Please book early and directly through the hotel quoting "Akademie Fresenius" as reference.

**Terms of Participation and Purchase:** The registration fee includes the participation in the event, event documentation, and, in the case of on-site events, lunch, coffee breaks, beverages as well as the evening event. You will receive written confirmation of your registration. Upon receiving our invoice, please transfer the amount due without further deductions before the event begins. The price of the event documentation includes the login details for the secure download section of our webpage where you will find the presentations in a pdf format. The login details will be sent to you via email after the event and as soon as advance payment has been received.

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

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