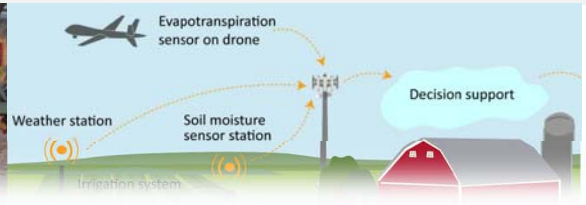
Precision Agriculture

RIFCON
REGULATORY AFFAIRS INFOBROKERAGE FAUNISTICS

…means precision risk assessment

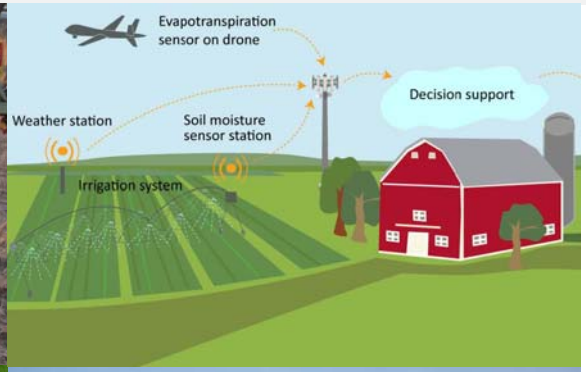
Let´s Go!



How?

When?

50% Reduction of Use and Risk of Pesticides by 2030



- ✓ Why?
- What?
- How?
- ✓ When?

“Precision Agriculture in the future will be just Agriculture“

PESTICIDE REDUCTION

TECHNOLOGY

Precision Agriculture

REGULATORY REQUIREMENTS

FARMERS´ NEEDS & ABILITIES

The Standard Scenario

Uniform treatment

g a.i. / ha
L product / ha

Assumed constant exposure in treated area

Uniform risk assessment for the cropped area

Options for environmental risk assessment adaptation

Integrated Environmental Assessment and Management — Volume 19, Number 1—pp. 17–23
Received: 6 December 2021 | Revised: 29 April 2022 | Accepted: 2 May 2022

Brief Communication

Precision farming and environmental pesticide regulation in the EU—How does it fit together?

Michael Faupel, Felix von Blanckenhagen, Johannes Lückmann, Daniel Ruf, Gisela Wiedemann, and Jan-Dieter Ludwigs
RIFCON GmbH, Hirschberg, Germany

Abstract

Precision farming technology allows pesticides to be applied precisely to the target while leaving the rest of the field untreated. In the regulation of pesticides, however, a homogeneously sprayed field is considered as the standard scenario. To this end, the current status of pesticide risk assessment from the perspective of terrestrial vertebrates, terrestrial invertebrates, and plants as well as aquatic organisms was examined with respect to the EU registration of a pesticide to be applied via precision farming techniques. We highlight which and how respective parts of the technical procedures could be adapted to account for this technology. Our results demonstrate that large parts of risk assessment procedures can be modified, reducing pesticide application and the exposure to the environment. However, further studies and definite procedures are essential to realistically apply, for example, area restriction in the currently required environmental risk assessment schemes. Precision farming has then great potential to achieve the political and public goal of reducing pesticide use, increasing environmental safety, and enhancing the needs of a sustainable agricultural practice. *Integr Environ Assess Manag* 2023;19:17–23. © 2022 SETAC

KEYWORDS: Environmental risk management, pesticide regulation, precision farming

Can Precision Application just be used in ERA?

Terrestrial vertebrates	Terrestrial invertebrates and plants	Aquatic organisms
Acute exposure	Pollinators, partly other arthroprods	Groundwater Drainage
Chronic exposure	Soil organisms, partly other arthropods, plants	Drift Runoff

TECHNOLOGY

PESTICIDE REDUCTION

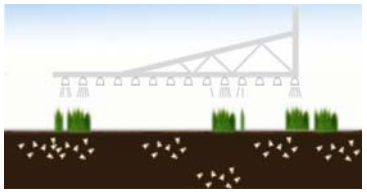
DATA

REGULATORY REQUIREMENTS

FARMERS´ NEEDS AND ABILITIES

… and the next steps!

selected precision agriculture efforts at RIFCON



From Thinking to Acting
- Publication on Regulation / Risk Assessment
- Concept for Field Study

Spring 2020

Conceiving New Precision Agriculture Study

Feb 2023

Find Partners and Sponsors → Next Level Precision Agriculture Study

2023 | 2024/2025

MAR JUN SEP MAR JUN SEP MAR JUN SEP MAR JUN SEP MAR JUN SEP MAR JUN SEP

2020 2021 2022 2023 2024 2025

Continue engaging where needed to cope with the farm-to-fork strategy

Pilot Ecotox Field Study

Apr 2021 – Apr 2022

Publication in IEAM

Jan 2023

Session at SETAC Europe / Publication of Pilot Study

May 2023

Pilot Study 2021-22

…about biological effects of precise application patterns

YouTube

SETAC Europe

Conclusion

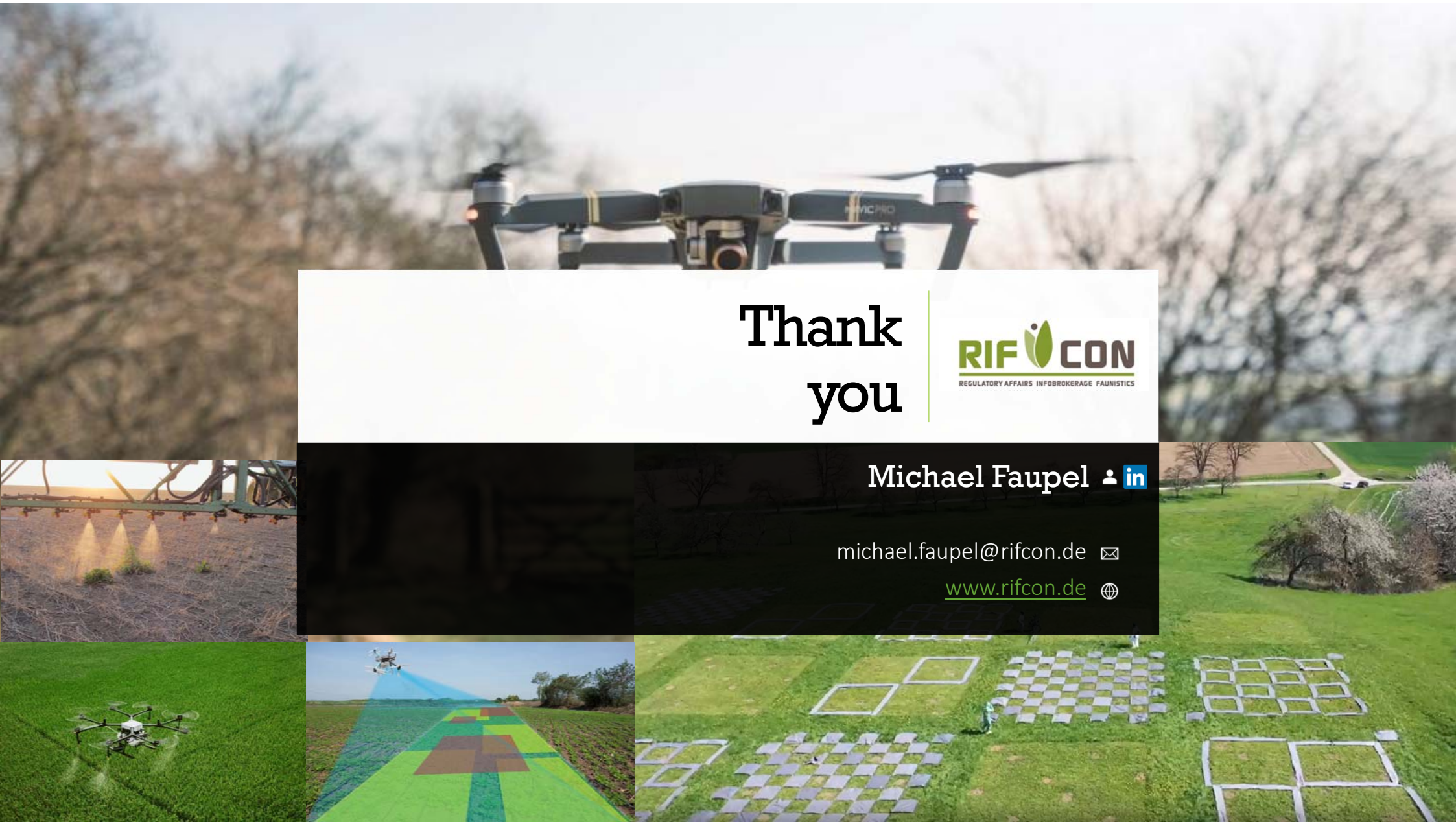
all starts in mind and …

The available technology has great potential

We can apply precise application in ERAs

We need

- **more field data**
- **to involve stakeholders**
- **more collaboration!**



Thank you

RIFCON
REGULATORY AFFAIRS INFOBROKERAGE FAUNISTICS

Michael Faupel

michael.faupel@rifcon.de

www.rifcon.de