



# Chemical Regulation

Fera works closely with plant protection product manufacturers to help develop effective, sustainable and safe chemical products that minimise both the impact on the ecosystem and pollution levels.

Regulations and restrictions on the use of chemicals to tackle plant and animal pests and diseases are becoming increasingly stringent, which means the range of chemical options available for tackling these threats is constantly being eroded. It's essential to ensure that any chemicals used in the environment do not pose a threat to plants, wildlife and ecosystems, while ensuring they are effective against target pests and diseases.

Fera works to the latest OECD Guidelines for the testing of chemicals, which are a collection of the most relevant internationally agreed testing methods used by government, industry and independent laboratories to identify and characterise potential hazards of chemicals. We use innovative tools and techniques in our regulatory safety testing, providing valuable support to companies in their chemical evaluation and registration efforts.

Our expertise enables us to show clients which toxicology areas, environmental, animal and plant considerations should receive priority.

Most importantly, we apply innovative approaches to maximize the value creation potential of each individual pipeline asset. For instance, we can help clients identify compounds that will provide more value in established markets or generate demand in rapidly growing emerging markets.

Using our breadth of regulatory understanding and wealth of knowledge we can facilitate that approval status together with being mindful on development timelines and cost awareness. We can help you design agri-chemical strategies that maximise the chance for a successful approval with the best possible outcome.

Our R&D clients include agricultural and chemical companies, as well as biological manufacturers, biotechs, and veterinary medicine and research organisations. With our close working relationships with EU Member State Competent Authorities, the European Food Safety Authority (EFSA), the UK Drinking Water Inspectorate (DWI) and the Chemicals Regulation Directorate (CRD), we have an extensive repertoire of unparalleled experience in environmental modelling and risk assessment of chemicals so we always meet the client brief.

Fera's approach to innovation means you will be able to adapt to change, taking advantage of new technologies and make improvements. We work with you to develop a plan that entwines with legislation and enforcement frameworks ensuring positive and progressive results are achieved, whether that be adaptation to emerging technologies or disruptive business model impacts.

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## Recent examples of our Research and Development projects

### 1 Aquatic Toxicology

Developing a fully flow through stream-mesocosm facility to enable our customers to do mesocosm scale testing.

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Testing of approved fungicides and novel control methods for efficacy against a range of plant pathogens including quarantine pathogens such as *Phytophthora ramorum* and *Hymenoscyphus pseudoalbidus* (the cause of ash dieback).

### 2 Plant Uptake Factor (PUF)

The chemical uptake by a plant reduces concentrations in soil and therefore leads to lower concentrations with the potential to move to environmental waters. We can help our customers demonstrate less of the compound is available for leaching to groundwater.

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Complex Aquatic Water Sediment Study (OECD 308) for a plasticizer additive with a low water solubility.

### 3 Bee Ecotoxicology

Part of the ring test on RFID technology for field studies and participating in ICPPR non-apis ring test working groups for:

Chronic Adult 10-day, Bumble Bee Acute Contact and Oral tests.  
We offer bespoke field studies for Bumble Bees.

### 4 Livestock Metabolism

We have conducted many metabolism studies with most major and minor livestock species. Studies are performed using radiolabelled or non-radiolabelled materials to meet regulatory requirement, for example VICH GL46.

### 5 Aged Sorption

Current European regulations require an OECD 106 Adsorption.

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Desorption study for determining exposure to ground water, we are helping our customers reduce predicted groundwater concentrations.