



# **BIOSTIMULANTS AND BIOPESTICIDES** **EXPERTISE IN PRODUCT DEVELOPMENT**

SGS's contract research services facilitate the development and registration of new biopesticide and biostimulant products that are required principally in Europe. The methodologies applied in this service can also be adapted to global destination market requirements.

In the EU, there are currently no harmonised regulations for biopesticide and biostimulant products. Each member state has its own regulations, and while there may be similarities, every country is different. Our experts, based across Europe, can advise clients on the most appropriate qualification route for a new product, develop the relevant methodologies and compile the technical dossier for submission.

### INTEGRATED PEST MANAGEMENT

Like any agrochemical product, biopesticides and biostimulants should be developed as part of an integrated pest management (IPM) programme. Our trials mirror the conditions of an IPM programme to demonstrate a biopesticide's performance when correctly applied.

### ROUTE TO MARKET

Overall, it can take two to three years to fully develop a new product. There are two key phases, registration of the active agent and approval of the formulation. Each product must undergo the following studies:

- Toxicology
- Effect on non-target organisms
- Product identity/chemistry
- Shelf life
- Efficacy
- Method development/validation

Though each study will be unique, efficacy trials must cover two full seasons, and shelf life testing will take a minimum of one year. Accelerated shelf life studies are available, but frequently are not acceptable to regulators.



To support this growing industry, applications for new registrations can benefit from a fast-track scheme. However, this only speeds an application once it has been lodged with the relevant authority. It does not shorten the research and development and field trials phase.

### REGULATORY SERVICES

SGS Regulatory Services support the registration of biopesticide and biostimulant products. From data analysis, project planning and study conduct management, to the coordination, compilation and submission of data, our services save you time, whilst minimising the risk and potential cost of unnecessary delays and omissions.

You can rely on our extensive experience of this complex registration process, plus our expertise in all aspects of data generation, to smooth the process of both submission and compliance.

Every new product requires its own unique protocols. In addition, appropriate test environments need to be established. With an extensive network of laboratories and field trial stations across Europe and the rest of the world, we can select sites that meet the requirements of your destination markets, and which effectively demonstrate performance. For example, selecting sites with poor soil quality, lack of specific nutrients, etc.

## FIELD TRIALS

Every field trial we undertake is designed to meet the specific requirements of a project, based on established trial guidelines and incorporating sufficient replicates. However, the novelty of biopesticide and biostimulant products means they are unusual. We are aware that to accommodate a lack of background data and non-comparability, these trials require extra attention and monitoring.

At the site selection stage, we can take samples to establish how a location is resourced regarding organic materials and chemical composition before progressing to trial. Subsequent field preparation could mean creating a deficiency to allow trial products to perform. We can also accommodate particular application methods, which may vary according to the product.

### Monitoring, sampling and testing

To ensure data capture at the level of detail required, we focus on regular monitoring in the field and documentation of all findings; taking a more research based approach to delivering results. Soil/plant samples are taken at different stages for testing, evaluation, and comparison against the samples from a control group and/or traditional farming practice.

### Assessment methods

In addition to standard assessments according to EPPO guidelines, we also monitor the metabolic profile of plants using a 'greenseeker', a hand held device that measures a plant's chlorophyll performance. The results derived from this test are used to determine the trial's next steps.

## WHAT ARE BIOPESTICIDES AND BIOSTIMULANTS?

In a world increasingly concerned with the environmental impact of the chemicals included in plant protection products and fertilisers, there is a growing awareness of the potential of natural agents to fulfil their role.

**Biostimulants** are organic and work to protect a crop by stimulating natural processes, thereby improving nutrient uptake and efficiency. These products can be applied at any stage of growth, even flowering, to increase crop yields.

**Biopesticides**, also organic, are natural pesticides comprising fungi, bacteria or viruses that act against a pest or disease.

## FORMULATION AND PACKAGING ADVICE

The best products on the market are only as good as their formulation and shelf life. Biological product performance is often affected by storage conditions (e.g. shipment, handling, on the shelf). We have in-house formulation experts who, after evaluation of stability and shelf life during the research and development phase, can advise clients on the best ways to formulate, package and label a product.

## WHY CHOOSE SGS?

Our global network of field trial stations and agricultural laboratories operate under strict guidelines and are equipped with state of the art instruments, to make it easier to deliver a safe and trusted product.

- Standardised operating procedures
- Quality approach and state-of-the-art equipment prevent bias in the studies performed
- Expertise throughout the network in Agronomy, Plant Pathology and Biology
- Access to a European/Global network offering a fully international service
- Rigorous training with continuous improvement
- Many in-house services under one management structure
- Customer focused approach

Contact us

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**WHEN YOU NEED TO BE SURE**

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