



CONTRACT RESEARCH SERVICES GET EFFICIENTLY TO MARKET

FROM SOURCE TO SUPPLY

Sustainable and productive agriculture needs a continuously innovative approach for improved management of crop production. With the growing demand for efficiency and with environmental concerns at the forefront, the ability to provide expertise for seed development, plant protection product development, soil fertility management and other specialty analytical data are crucial for success.



To provide solutions for this highly specialized sector, SGS has developed a unique package of added value services. Life science companies, plant breeders, seed producers, agrochemical companies, distributors, fertilizer suppliers and ultimately farmers benefit from our Contract Research Services.

Our experienced staff conducts field and laboratory trials to support the screening, development, and registration of agricultural chemicals, biopesticides, fertilizers, and new plant varieties and genetics.

BENEFITS

- Standardized operating procedures
- Quality approach and state-of-the-art equipment prevent bias in the studies performed
- Expertise throughout the network in agronomy, entomology, weed science, plant pathology, biology and GM crops
- Rigorous training with continuous improvement
- Many in-house services under one management structure
- Customer focused approach

SGS VALUES

- Passion
- Integrity
- Entrepreneurialism
- Innovative spirit

GREENHOUSE STUDIES

SGS has expertise in testing plant protection products for efficacy and selectivity within greenhouses on a wide range of crops.

New chemicals and formulations are screened in controlled conditions, regardless of growing season, under natural or artificial pest infestations to provide early information on their biological activity prior to progressing with Field Studies. Fertilizer studies can be tested in a controlled environment, with different soil types, and nutrient isolated effects.

SGS services can also involve crop safety investigation and dose rate studies using small pots and cages.

OUR SERVICES

- Crop safety screening
- Efficacy testing
- Dose rate definition
- Screening of new formulations
- Seed germination and propagation tests
- Artificial pest infestation
- Protected soil/Cage/Pot/Tray trials
- Biopesticide testing



DEMONSTRATION FIELD TRIALS

SGS provides additional marketing solutions for your Plant Protection Products in terms of tailor made comparative performance trials, which may be used to educate potential customers of the added value gained from your products.

SGS offers services for the development and demonstration of product comparisons to demonstrate the capabilities of multiple agrochemical compounds. We can also manage large scale demonstration centers, where a wide range of crops and varieties can be planted and used in conjunction with spray programs or compounds to provide a diverse environment ideal for education, demonstration, development, sales and marketing purposes.

EQUIPMENT

SGS has a wide range of specialized equipment that enables us to conduct

many types of trials. We are constantly reviewing and renewing our systems and tools to bring better technology to the field, to laboratories and into our offices.

OUR SERVICES

- Market/Sales support trials
- Product comparison trials
- Sequence comparison
- Timing comparison
- Variety demonstration
- Seed rate demonstration
- Field demonstration centres
- Variety pest interaction
- Irrigated, enhanced conditions



EFFICACY FIELD STUDIES

SGS offers a flexible and impartial resource for your product development, supporting your needs throughout the research process.



Our experienced staff can conduct field trials to support the screening, development and registration of agricultural and horticultural chemicals, biopesticides, fertilizers and seeds (including Genetically Modified Organisms). The trials are conducted

from our field stations located across the world, offering a complete and competitive service from one source. All of our testing facilities comply with relevant, industry specific Quality Management Systems for conducting regulatory efficacy studies for local and international submissions.

OUR SERVICES

- Product efficacy testing
- Local, regional and global study management
- Electronic Data Exchange in ARM (Agricultural Research Management) software and company defined versions
- Full trial/Project reports
- Secure internal data management system (Intranet)

CATEGORIES

- Fungicides
- Herbicides
- Insecticides
- Biopesticides
- Fertilizers
- Acaricides
- Nematicides
- Seeds
- Genetically Modified crops
- Soil/Crop enhancement
- Plant growth regulators
- Adjuvants

Applications in all countries are aimed to comply with Good Agricultural Practice standards.

SGS offers efficacy testing on any crop or uncropped situation in all regions of the world.

GENETICALLY MODIFIED BIOSAFETY TRIALS

SGS provides an extensive range of field trial services to help you ensure the environmental and product safety of new genetically modified (GM) crops.



Extended safety testing is required for new genetically modified crops. Some studies are regularly required and other studies are more specifically tailored based on the new modification and quality of the trait. Good Laboratory Practice (GLP) principles specify how the study for each genetically modified trait should be conducted. Accuracy in planning, performance, product stewardship measures and documentation is vital at all times.

Our GM biosafety field trials offer you accredited operations, standardized operating procedures, a proven field trial document and quality system (including

GLP), compliance stewardship program, trained and experienced staff, and state-of-the-art equipment to prevent bias in the studies performed.

OUR SERVICES

- Project management
- Agronomic equivalence
- Nutritional equivalence
- Non-target organism testing
- Production of reference material for animal feeding
- Environmental impact assessment
- Soil accumulation
- Soil dissipation

SPECIALITY STUDIES

SGS has a number of talented, innovative personnel who can design, manage and conduct a range of speciality studies in both the field and laboratory.

New products may require special testing methods to demonstrate the potential of the product to the best advantage. These studies can be based on existing standard methods with small variations for a given product type, or totally bespoke studies designed in conjunction with the client to meet their particular needs.

FIELD SCREENS

- Small plot, unreplicated or replicated
- Herbicide, fungicide, fertilizer, crop/variety type
- Rate and formulation comparisons

NEMATODE STUDIES

- Greenhouse
- Field crops

CROP SEQUENCING

- Single and multiple, following crop effects

SPECIFIED USES

- Forestry
- Fertilizer
- Horticultural
- Soil enhancement

CONTROLLED STUDIES

- Artificially inoculated and infested studies
- Irrigated studies
- Climate controlled studies



PEST RESISTANCE MANAGEMENT

Agriculture production is impacted by more than 1,900 crop pests and pathogens worldwide. Resistance monitoring fights back against the increasing resilience shown by pests and plant diseases to crop protection products. Our resistance monitoring program supports sustainable agriculture through sampling and testing.

OUR SERVICES

- Support on development of resistance management plans
- Field sampling
- Baseline studies
- Monitoring tests



BENEFICIAL/NON-TARGET STUDIES

SGS provides services in the higher tier testing for non-target arthropods and plants around the world.



In recent years, there has been an increased interest within the regulatory authorities in the protection of beneficial species, with a specific focus on pollinators and non-target plants and arthropods. Together, with a focus on sustainability and protecting the environment, SGS has recognized the need for quality services in this area and has expanded its resources to meet these challenges.

OUR SERVICES

- Impact of pesticides and genetically modified crops in non-target arthropods community
- Evaluation of natural enemies and beneficial arthropods
- Assessment of arthropods in plants, traps and soil
- Residue studies including residue analysis of all matrices

GLP FIELD STUDIES

SGS's global network of experienced field scientists is fully equipped to meet all the challenges of conducting GLP studies in several crop types and regions of the world.



The SGS philosophy of providing a single, high quality service has resulted in our use of standardized operating procedures, based on the most stringent GLP requirements, and designing an in-house data management system for monitoring the studies.

OUR SERVICES

- Project management/Study directorship
- Pesticide residue trials
- Import tolerance studies
- Genetically Modified biosafety trials

SGS can offer trials in the field and greenhouses under controlled conditions with all trials carried out by our experienced staff. Study management is run through our team, with our sites being GLP compliant and audited regularly. Samples are monitored and transferred on a regular basis in suitable conditions with a carrier to our analytical laboratories or a facility of your choice.

ANALYTICAL LABORATORY

SGS laboratories have the experience and analytical instrumentation necessary to provide contract laboratory research testing for different needs. Our local or global laboratories can provide GM and residue analysis, including method development and validation, as well as studies as directed by client protocol.

SGS EXPERIENCE

- Pesticides
- Biotech traits

CUSTOMIZED GLP & ISO COMPLIANT SOLUTIONS

- Chemical residue analysis
- Chemical application verification
- Customizable field research
- Gene expression by qPCR, RT-PCR
- Protein expression by Immunoassay, ELISA
- Compositional analysis
- Sample processing

STUDY TYPES

- Method development and validation
- Crop/Soil residue analysis (plants, processed products, soil, water, etc.)
- Trait related studies

- Investigation of storage stability
- Product/Compositional equivalence
- Contaminants

RESIDUE

- Pesticide residue
- Mycotoxins (aflatoxins, vomitoxin, fumonisins, etc)

CHEMICAL COMPOSITION

- Moisture, protein, crude fat, crude, fiber, ash
 - Amino acid profiles*
 - Fatty acid composition*
 - Infinitesimal composition*
- * US Laboratory

PROTEIN SERVICES

- Protein expression analysis
- Matrices tested include seed, plant tissue and soil



CONTACT

E-mail: Agri_brasil@sgs.com

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WWW.SGS.COM
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