Crop Science

Trusted. **I**ndependent. **C**ommitted.

The future of crop science

Sustainability, productivity and efficiency are positively impacting the agriculture industry. Innovative crop science boosts yields, lowers costs and mitigates the impact of adverse weather conditions on crop production – for example, through genetically improved seeds bred specifically to tolerate stresses (like droughts and diseases). Crucially, it ensures a smooth and steady supply of crops throughout the world. Organizations must maintain high standards at all times. Not only will this ensure regulatory compliance, but it will also ensure the efficiency and sustainability of their yields and products going forward – regardless of challenging conditions.

At SGS, our industry-leading agroscience services provide cutting-edge solutions to benefit parties operating throughout the crop supply chain.

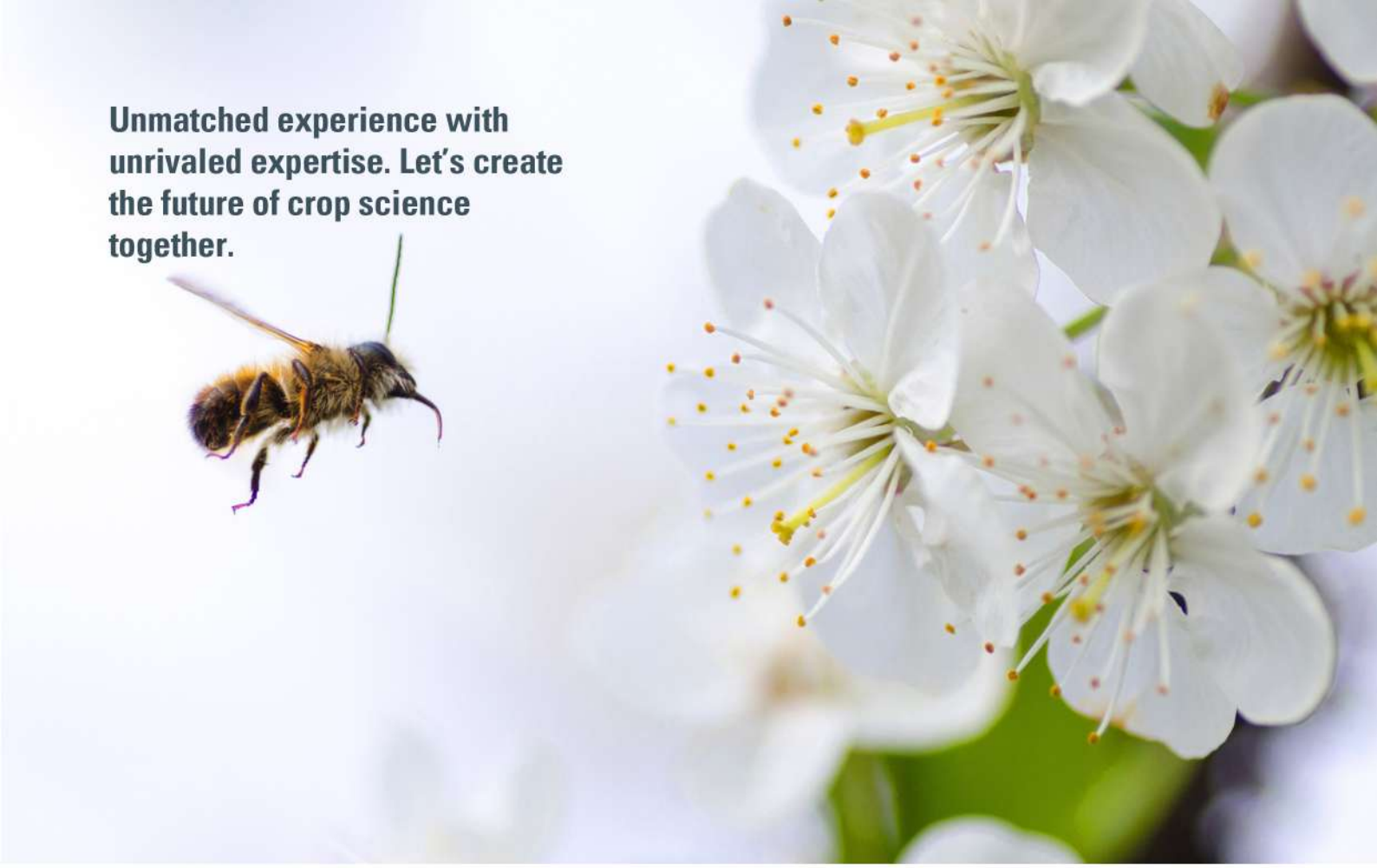
Using state-of-the-art technologies and equipment, our experts can help you improve productivity, ensure sustainable farm income, develop new agronomical inputs (such as seeds, pesticides, fertilizers and biostimulants) and deliver safe products to the market.

Our global network of local experts will be on hand for all your testing, R&D and quality control requirements. They will help you optimize your operations, leveraging cutting-edge field and laboratory facilities to provide you with data-driven insights. Our specialists will blend local knowledge with the ability to test crops and products under a range of different conditions. And thanks to our regulatory knowledge, you'll be able to operate across a range of global markets with ease.

We are SGS – a culture built on trust, with a passion for excellence.

Learn more about how we deliver value to society.

Unmatched experience with unrivaled expertise. Let's create the future of crop science together.



Our solutions span every phase of the agricultural production cycle. They include:

Crop production

Chemical and biological research & development

Seed research & development

Seed quality control

Crop production

Agroscience is continually being redefined by the emergence of new technologies, changing regulations and the need to feed an increasing world population.

Technological developments throughout the past few decades – from data analytics to drones – have been particularly notable and have had a profound impact on the agricultural industry as a whole.

With SGS by your side, you can optimize crop production to improve both productivity and profitability. This includes testing soil, water, plant tissue, manure and nematodes.

For example, rigorous soil testing – before planting and after harvest – highlights the nutrient levels present in the soil. In addition, plant tissue testing during the growth stage can potentially diagnose nutrient deficiency, or even toxicity. Testing water and fertilizers ensures that plant growth is maximized.

"Agriculture stakeholders cannot rely on genetics alone to drive yield. Nutrients are more important. SGS has perfected the art of soil science with global operations in North & South America, Australia, Europe, and of course, Africa. SGS soil science can help dramatically reduce the costs of farming inputs, whilst simultaneously boosting yields and thus increasing profitability and the availability of crops."

Cobus Burger
Managing Director, SGS in South Africa

Precision Agriculture

In the form of soil mapping, variable-rate fertilizer application, seed recommendations, crop inspections, classification, water management and fertigation monitoring services – helps farmers reduce costs by optimizing their use of resources.

We offer offers this service in a number of regions throughout the world. Farmers can also gain access to our unrivaled team of agronomists, who will support them every step of the way by blending expert data interpretation – using SGS-developed technology platforms – with specialist local knowledge.

Farmers can rely on accurate, up-to-date data to power their decision-making, and can also ask our expert crop consultants for advice where necessary.

Leverage our state-of-the-art technology and our specialists' unparalleled crop production expertise to maximize yields, while keeping costs under control at all times. No matter where you're located, our global network of local experts will be on hand to help you optimize your operations.

Seed research & development

Seed research & development is a mainstay of crop science, introducing innovative solutions that power profitable yields going forward. At SGS, we provide clients with a number of key seed research & development services.

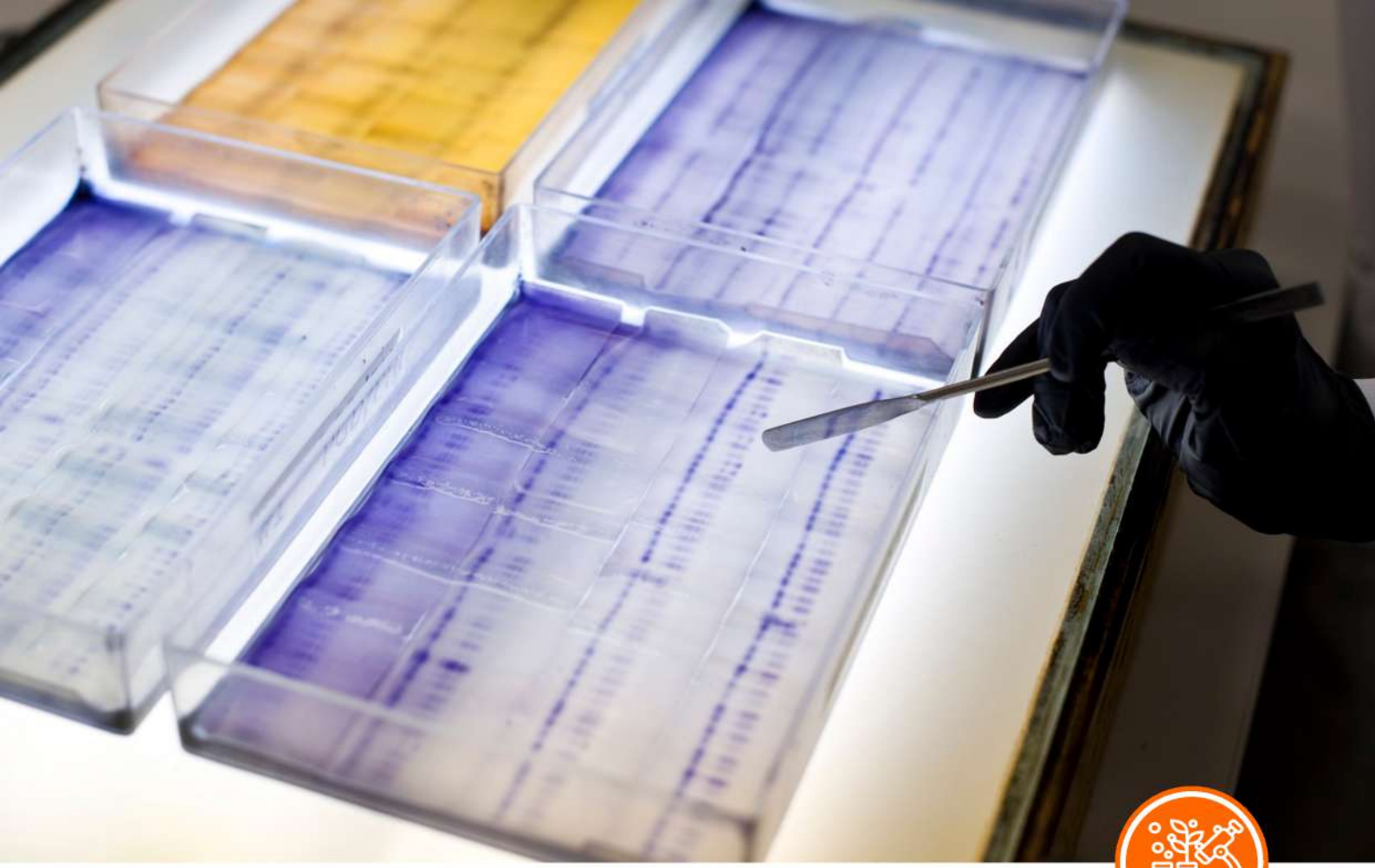
Our experts will help you analyze molecular breeding, conduct vigor and stress evaluations and provide you with detailed compatibility evaluations. Importantly, our vast array of services will also support you when it comes to biological and chemical seed treatment – for example, minimizing the risk of dust-off from chemically treated seeds.

Work in tandem with our agroscience specialists to safely and effectively optimize crop growth going forward.

Our experienced specialists, working in GLP and ISO 17025 accredited laboratories provide a range of customized services and cutting-edge R&D solutions. Maintain a sustainable R&D product pipeline by selecting the best solution to enable you to find the best candidates.

Our seven steps for developing effective biological seed care:

- **Dust-off testing**
- **Seed safety studies**
- **Compatibility testing**
- **Seed treatment application**
- **Seed gemination and vigor**
- **Plantability and flowability testing**
- **Loading rate and treatment coverge**



Chemical and Biological R&D

The field of plant protection products (PPPs) is constantly evolving. This is partly driven by governments and companies across the world who are increasing funding in biological research, as shown by initiatives such as the EU's Green Deal.

Coupled with this, organizations that manufacture chemical and biological products have to constantly keep up with ever-evolving rules on the permissibility of agriproducts – whether it´s the more restricted use of chemical pesticides or new regulations on the use of biostimulants.

We are expanding our comprehensive service portfolio through cooperation with partners for food processing, and laboratory & animal feeding studies (in-life phase).

Ongoing innovation is required to keep up with both regulatory requirements and crops' natural evolution. Products that worked well in previous years might not be so effective in the future. However, this requires vast laboratory testing capabilities to understand the product's effects/characteristics in terms of ecotoxicology, biodegradability, resistance and the environment.

All these tests are required in addition to pesticide residues, microbiology, and physical and chemical characterization.

Our on-the-ground specialists can conduct a range of studies out in the field. These include GEP efficacy, selectivity and screening studies; GLP residue and environmental fate studies; biosafety studies; and rigorous assessments of the effect on non-target organisms. This could be in the open field, greenhouses, or in simulated conditions.

Our global network of laboratories provides the answer to the swiftly changing regulatory landscape, while our field studies allow you to test your products in a range of different meteorological and environmental conditions to ensure they will be effective throughout the world.

Our global presence will take your research and development to new heights – giving you a true competitive advantage. We help our clients get their products to market, meeting the unique geographical needs and regulatory requirements of the given country.

We're a global company with a local touch. Every region of every country is different.

Our large network of laboratories and global team of field experts understand those subtile and significant differences in local environments, allowing you to assess your product's efficacy, effects and safety, while improving time to market.

Seed quality control

High-quality seeds are the key to achieving consistently excellent yields. Organizations operating within the crop science field must therefore prioritize seed quality control at all times.

SGS has the largest independent network of seed laboratories.

We provides a myriad of seed quality control solutions. These enable our clients to analyze their seed germination, seed genetic and physical purity, the effects of treated seeds, and general seed health and vigor.

Our trait confirmation tests reveal your seeds' characteristics in detail, which will for instance ensure that you don't unintentionally plant genetically modified products where they are banned. We also help our clients gain the internationally renowned ISTA Quality Certification, which simplifies the process for the export of seeds worldwide.

Our global experts' unmatched agricultural expertise, coupled with our advanced ISO 17025 accredited laboratory facilities – promising rapid turnaround times – makes us the perfect seed quality control partner.

Our independent laboratories will work tirelessly to provide you with crucial, need-to-know insights at all times.

Our unrivaled global network

500+
Laboratories

116
Countries

145+
Years

Take your natural resources operations to the next level.

Get in touch today.

Trusted. Independent. Committed.

Contact us

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sgs.com/linkedin-natural-resources

SGS

When you need to be sure