

Genetic ID®

Products and Services

Genetic ID offers a full range of specialized services tailored to the operations and individual requirements of seed companies, growers, elevators, transporters, processors and manufacturers, retailers, and testing laboratories around the world.

The fundamental purpose of Genetic ID services is to provide clients with the confidence of independent, reliable, and authoritative testing and certification through third-party confirmation and verification of quality assurance.

The scientific expertise and integrity of Genetic ID are recognized and trusted by both clients and agencies in various countries regulating and restricting food imports. That trust is the cornerstone of all Genetic ID client services.

Consulting and Advisory Support

Included in all of the services offered by Genetic ID is client consulting and advisory support:

- Sharing practical knowledge and information
- Assisting in process and systems development and strategic planning
- Standing behind the client with third-party support, full documentation and defensibility, and rapid response whenever needed

Testing Services

Genetic ID has developed and established leading edge DNA testing, diagnostics, and analyses that are grounded in the most rigorous, accurate, and reliable scientific methodology. Genetic ID offers rapid-turnaround options for results within 24 hours.

Genetic ID follows these six elements of successful testing:

1. Choose the correct test for the application
2. Employ global experience: know the regulations
3. Control costs and timing
4. Apply protocol and testing method consistently
5. Interpret results correctly
6. Maintain security and confidentiality

Genetic ID offers a full palette of qualitative and quantitative testing options. Genetic ID offers enormous flexibility in creating a customized testing program to suit your needs. The tests are typically used in one of four major application categories.¹

Test Application Categories

<u>GMO Detection</u>	Genetic ID can reliably detect ALL commercialized genetically modified organisms. GMO testing is used to detect and quantify the presence of GMOs.
Varietal ID Testing	Varietal ID testing is used to detect the presence of specific GMO varieties. It is typically used when a food source must meet regulatory requirements for specific GMOs, such as the absence of StarLink or other unapproved varieties.
<u>Allergen Detection</u>	Genetic ID can test for most common food allergens. Use these tests to verify compliance with regulations to respond to consumers' needs.
<u>Animal Feed Testing</u>	Animal Feed testing is used to detect the presence of animal-derived materials, such as meat and bone meal, in animal feed or its components, whether species-specific or for a general barnyard screen.

¹ If you have received this document electronically, click the links in the left hand column for more detail. Otherwise, call Sandy Myers at 1.888.229.2011 (Toll Free USA/Canada), or +1.641.472.9979 or go to www.genetic-id.com.

Certification Programs

Testing assures the GMO content of the laboratory sample. With certification product claims are backed by a fully traceable third party certified production system and the experts at Genetic ID.

Certification Benefits:

- Streamlines Costs
- Full Traceability Database
- Defensible Product Claims
- Statistically Robust Sampling Plan
- Efficient Testing Protocol
- Third Party Verified
- Highest P-value means lowest risk
- Maximum confidence for buyer and seller
- Backed by the experts at Genetic ID

Why certify?

Certification is the only defensible means of selling and buying product, especially in the export world. It offers maximum protection while streamlining costs.²

² If you have received this document electronically, click here for more detail: "[Why Certify?](#)" Otherwise call Sandy Myers at 1.888.229.2011 (Toll Free USA/Canada), or +1.641.472.9979 or go to www.genetic-id.com

How confident is it?

Genetic ID programs lead the industry in delivering a "P-value approach to certification". The P-value puts a concrete number forward that quantifies the rigor of the program.

Is it expensive?

Certification is a systematic approach to GMO control. Testing and sampling programs are designed to achieve maximum confidence and efficiency, while keeping costs down.

Genetic ID Certification Programs³

Regulatory Compliance Verification Program	Satisfies government import/export labeling regulations anywhere.
CERT-ID non-GMO	The world's most widely accepted non-GMO certification program developed over three years by Genetic ID.

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Genetic ID Products

Genetic ID offers a wide range of PCR kit options that can be customized to meet client needs. The comprehensive, ongoing work of Genetic ID's research team ensures that GMO analysis kits are the most flexible, robust, and reliable available. Genetic ID's solution-oriented client service and technical support teams work in partnership with you to help meet the often-complex challenges related to GMO analysis.

Kits

Fast ID - DNA Extraction and Purification Kit	Fast ID provides high yields of exceptionally pure DNA from a wide variety of agricultural and food products. Fast ID is especially designed to provide high yields of PCR-active DNA from minimally, moderately, and highly processed foods. The extracted and purified DNA is suitable for any molecular biology procedure, such as PCR (Polymerase Chain Reaction) amplification, restriction digestion, cloning, sequencing, etc. Genetic ID recommends the use of Fast ID with all of its PCR-based GMO detection kits for optimal amplification and minimal inhibition.
GMO ID - GMO Screening	These kits are designed to detect multiple GMOs using primer sets that are specific to transgenic sequences common to many GMOs.
Varietal ID - GMO Identification	These kits are designed to detect specific transgenic events. Each primer set offered in this module is specific to a single transgenic variety (event) and would be appropriate for screening specific GMOs of interest. The only exception to this is that two primer sets are required to identify and distinguish Aventis T14 and T25 Maize.
Animal ID	These kits are designed to detect and/or identify the species of animal by-products, such as meat and bone meal in animal feed. They can also be used for species identification and detection of adulteration in meat products. Kits have a range of specificity. One can test for individual species (e.g. beef), or a broader class (e.g. ruminants), or test for every animal in the barnyard.

EasyReady ID GeneChip: Leading-edge Technology

PCR testing is recognized around the world as the most rigorous, sensitive, and accurate GMO testing method. Yet PCR is more demanding, complex, and time-consuming than less accurate methods. Now the Genetic ID's EasyRead ID GeneChip provides application of the most rigorous PCR screening, reducing cost and complexity while advancing analytical capability. This new leading-edge technology just made the best testing easier, much faster and more economical as well.

- For detection of GMO's or allergens, or to screen animal feed for ruminant by-products.
- EasyRead ID GeneChip replaces the complicated, cumbersome, time-consuming electrophoresis step in PCR screening.
- Unlike most other DNA chips, the EasyRead ID GeneChip requires no costly scanner, just normal vision.
- EasyRead ID GeneChip itself becomes a permanent record that the product lot meets specifications, and/or can simply be run through an office scanner to create an electronic copy.

Easy, Cost-Effective, and Fast

Any presence of DNA from GMOs, allergens, or animal byproducts will trigger a color change in the EasyRead ID GeneChip that you will see plain as day. The absence of colored spots on the EasyRead ID GeneChip is clear and documented proof of your product integrity.

With the EasyRead ID GeneChip technology, detection of these regulated ingredients is now within easy and affordable reach. With this chip, product quality is assured to the highest standard because it has passed the toughest test: PCR screening.

Global Laboratory AllianceSM

Organized and coordinated by Genetic ID, the Global Laboratory Alliance is a comprehensive network of premier scientific laboratories, strategically located around the world, offering the most accurate and reliable GMO testing capabilities and services to the international food industry.

Advantages:

- Ensures consistent testing worldwide
- Facilitates trade and regulatory compliance
- Provides rigorous technology, proven in tens of thousands of samples
- Minimizes the risk of refused shipments

The growing Global Laboratory Alliance joins Genetic ID laboratories in the U.S., Japan, and Germany. Together with offices and representatives spanning five continents, the GLA provides access to state-of-the-art testing services wherever clients may be operating or conducting business – **global reach with local support**.

The Global Laboratory Alliance has established uniform international standards of excellence in GMO testing and certification services, utilizing the same rigorous proprietary testing and documentation protocols to ensure consistent compliance with regulatory requirements in every region of the world.

In addition, Global Laboratory Alliance members share their expertise and experience as a common resource available to their clients, including information on the

latest scientific as well as local and regional regulatory developments and newly commercialized or restricted GMO varieties.

All members and their clients also benefit from continuous cooperative efforts to improve the precision, efficiency, versatility, speed, and simplicity of leading edge GMO testing technology.

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