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PARTNER CONTENT

New Tannin Testing for Faba Beans: A Game-Changer for Breeders and Protein Supply Chains



By: Holly Gelech,
Senior Business
Development
Manager, SGS
Canada Crop
Science



By: Daniela
Guáqueta,
Analytical
Chemistry
Technologist,
SGS Canada
Crop Science

As the largest network of seed testing laboratories in North America, we're always looking for ways to support plant breeders, seed growers, food processors and producers with cutting-edge testing services. Our latest innovation? A brand-new tannin testing service for faba beans. This test is a game-changer for breeders working to develop high-performance varieties, for seed producers ensuring the integrity of their crops and for protein processors confirming ingredient quality.

Why Tannin Testing Matters

Faba beans are an important nitrogen-fixing crop with significant benefits for soil health, sustainability and crop rotation. However, their value in the marketplace depends on their tannin content. There are two key types of faba beans: tannin-containing varieties, which are primarily used for human consumption, and low-tannin (or zero-tannin) varieties, which are preferred for livestock feed due to better digestibility and palatability.

Because faba beans can naturally outcross—meaning their pollen can travel miles via pollinators—it's crucial for breeders and seed producers to verify whether their varieties maintain the desired tannin levels. Without accurate testing, a low-tannin variety intended for feed could accidentally contain higher tannins, leading to feed refusal and reduced performance in livestock operations. Similarly, human food-grade faba beans need to meet specific market standards.

A Fast, Convenient Test for Breeders, Seed Growers and Food Processors

One of the biggest advantages of our new tannin testing method is how quick and efficient it is. Using UV spectrophotometry, we can quantify tannin levels with precision, providing fast turnaround times to support breeders and food ingredient companies in making informed decisions. The process involves grinding the seeds, extracting tannins, and reacting them in a vanillin assay—yes, the same compound that gives vanilla its distinctive scent. This

assay targets the type of tannins that are predominant in faba beans, which are condensed tannins. The resulting colour change indicates the tannin presence, and our calibration curve is the reference standard to quantify.

This service is already available, and we've received samples from across the industry since launching in February. Whether breeders need to verify tannin levels in early-stage breeding lines or seed growers want to confirm the genetic purity of their certified seed or food processors seek to measure tannin quantities in faba bean subproducts, this test provides a simple and reliable solution.

Supporting Breeders, Protein Ingredient Companies, and the Future of Faba Beans

For plant breeders, access to reliable tannin testing is a critical step in variety development and registration. New faba bean cultivars must be classified as either tannin or low-tannin types, and our testing ensures that breeders have accurate data to support regulatory submissions and commercialization. Sample submission is made easy, with all faba bean testing under one laboratory, SGS Sherwood Park. In addition to seed quality testing (germination, disease, TKW) SGS also conducts vicine and convicine quantification for faba beans to ensure market suitability and product safety. By working closely with breeders, we're helping them bring better varieties to market — ones that meet the needs of farmers, processors and end-users.

As the demand for alternative proteins and sustainable livestock feed continues to rise, faba beans have an exciting future. Our role is to provide the testing services that keep this industry moving forward. Whether you're developing the next breakthrough variety or ensuring the integrity of your seed production, we're here to help with fast, accurate and convenient tannin testing.

If you're a breeder, seed grower, or protein ingredient company looking to take advantage of this service, reach out today — we're ready to support your needs with industry-leading testing solutions.