

Agricultural Marketing Service

# Seed Regulatory and Testing Division

The Seed Regulatory and Testing Division (SRTD), located in Gastonia, North Carolina, enforces the interstate commerce provisions of the Federal Seed Act, provides service testing under the Agricultural Marketing Act, and administers programs to benefit both the consumer and the U.S. seed industry.

## Federal Seed Act Services

The Federal Seed Act (FSA), a truth-in-labeling law that regulates agricultural and vegetable seed shipped in interstate commerce, ensures efficient and fair marketing of agricultural and vegetable seeds in the United States. SRTD serves as the only national body that provides regulatory oversight through enforcement of the regulations. The program is primarily administrated through cooperative agreements with the 50 states. SRTD serves as the final authority in matters related to mislabeled seed moved across state borders.

## Agricultural Marketing Act Services

SRTD provides seed testing services as a voluntary, fee-for-service program under the Agricultural Marketing Act (AMA). SRTD examines vegetable and agricultural seeds, including field crops, forage, and turf and other grasses to promote high quality products in the U.S. seed industry and assist new or developing markets with their testing needs. The Division tests the seed for purity, germination, noxiousness, moisture content, pathogens, and more. SRTD issues a Federal Seed Analysis Certificate stating the test results as required by many importing countries. SRTD is accredited by the International Seed Testing Association and is recognized as an unbiased authority.



## Process Verified Program

LPS administers the Process Verified Programs for Seed, including the Accredited Field Inspection Program, Accredited Seed Sampler Program, Accredited Seed Laboratory Program, and Accredited Seed Conditioning Program. These programs, based on the AMS Quality Systems Verification Program, support seed commerce by providing uniformity in methods and procedures for those participating. Process Verified Programs for seed are voluntary, user-fee services.

## OECD Seed Schemes

LPS represents U.S. interests with the Organization for Economic Cooperation and Development (OECD) Seed Schemes. The OECD is an international seed certification program that facilitates international seed trade by providing quality assurance through a user fee program for participating countries. The United States is one of 58 countries that participate in the OECD Seed Schemes.

# USDA Agricultural Marketing Service Seed Regulatory and Testing Division

## Seed Testing Services



The Seed Regulatory and Testing Division (SRTD) provide seed testing services for enforcement of the Federal Seed Act and other activities under the Agricultural Marketing Act of 1946. In addition to our regulatory mission, we provide seed quality testing that is recognized industry-wide around the globe. We offer high quality, efficient, and reliable seed testing services.

Our professional staff consists of five Botanists, a Biological Science Technician, a Plant Pathologist, and a Plant Physiologist. All of our analysts are accredited as Certified Seed Analysts, in germination and purity, by the Association of Official Seed Analysts (AOSA). Our staff has over 100 years of combined experience testing seed kinds from every corner of the United States and around the world. Testing carried out by the SRTD staff is recognized in the seed industry as quality work performed by an unbiased authority in seed testing.

SRTD is accredited by the International Seed Testing Association (ISTA) as a laboratory with proven technical competence and an effective quality management system, verified by audits and proficiency testing. The SRTD is also recognized by the United States Department of Agriculture (USDA) as an Accredited Seed Laboratory (ASL) that has passed a rigorous USDA Process Verified Program Audit.

### ***Our Mission:***

Enforcing the Federal Seed Act and providing services to foster truthful seed marketing for the global community.

### ***Our Pledge:***

- We maintain a well-trained and professional staff with over 100 combined years of seed testing service committed to being helpful, courteous, and responsive to our customers' needs.
- We perform our services in an unbiased manner according to applicable rules or regulations (FSA, AOSA, or ISTA).
- We strive to provide services that are of the highest-quality, integrity, and accuracy in a cost-effective manner, within established time frames.
- We maintain effective communications with our customers and encourage their feedback.

### ***Our Services:***

SRTD offers accurate, efficient, and cost efficient testing services conducted according to applicable AOSA rules, FSA regulations, and ISTA rules.

- Purity
- Germination
- Noxious-Weed Seed Exam
- Moisture Content Determination
- Conductivity
- Bioassay/ Electrophoresis/ PCR
- Seed Count
- Accelerated Aging
- Canadian Seed Grading
- Seed Health
- Variety Testing (laboratory, field, or greenhouse)

### ***Certificates Provided:***

- Federal Seed Analysis Certificates – These documents that display SRTD test results are accepted worldwide by countries importing U.S. seed and grain.
- ISTA Orange International Seed Lot Certificates – These certificates facilitate the export of seed into the global market.



## We Provide Services for All of Your Seed Testing Needs:

### Service Testing

**Purity Exam** – Separates components into pure seed, other crop seeds, weed seeds, and inert matter.

**Germination Test** – Estimates the quality of seed when grown under favorable conditions.

**Noxious Weed Seed Exam** – Estimates occurrence of prohibited and restricted weed seeds in a seed lot.

**Tetrazolium Test (TZ)** – Estimates viability when conducted on a 400 seed test. Estimates dormancy at the end of a germination test.

**Canadian Seed Grading** – Identifies, classifies, and reports impurities. Assigns a Canadian grade name to all crop kinds established in Canadian grading tables.

**Grow-out** – Distinguishes variety or kind by examination of plant/flower/fruit characteristics as applicable following growth to maturity in greenhouse. Used when visual ID of kind or variety is questionable or not possible.

**Fluorescence Test (Ryegrass)** – Estimates percentage of annual and perennial ryegrass seed. Roots of seedlings are examined under ultraviolet light for fluorescence which indicates an annual ryegrass variety.

**Fluorescence Test (Oats)** – Distinguishes white and yellow varieties by means of fluorescent lemmas/paleas.

**Ammonia Test** - Distinguishes red and chewing fescue from hard and sheep fescue. When treated with ammonia solution, roots of red and chewing fescue fluoresce yellow, roots of hard and sheep fescue fluoresce green.

**Sodium Hydroxide Test** – Distinguishes between red and white wheat by reaction to treatment with sodium hydroxide.

**Soybean Peroxidase Test** – Distinguishes between soybean cultivars

**Conductivity Test** – Determines seed vigor by measuring electrolyte leakage from seeds.

**Accelerated Aging Test** – Determines vigor by germinating seeds under favorable conditions, following a controlled stress period.

**Moisture Test** – Determines the moisture content of seeds

**Seed Health Testing** – Isolates and identifies of seed-borne pathogens by validated methods. Strip test methods and ELISA are available for some pathogens.

### Advanced Variety Testing:

**Gel Electrophoresis** – This procedure uses electric currents to separate protein molecules by size or charge in various gels. Crop seed varieties can be distinguished by differences in genetic characters visible in the gel.

**PCR (Polymerase Chain Reaction)** – A molecular biology technique used to amplify a piece of DNA, generating thousands to millions of copies of a particular sequence that may be used in seed trait testing.

### **For More Information on Seed Testing Services Contact:**

Seed Regulatory and Testing Division

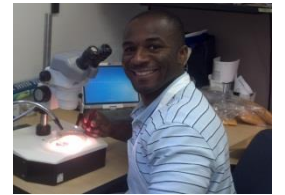
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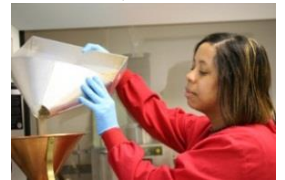
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