

Routine Testing Services

Purity Analysis* (P): Determines percentage of pure seed, inert matter, other crop and weed seed present in the sample submitted for analysis. Identification is made of the other crop and weed seed found and reported at the rate of occurrence.

Germination* (G), also known as standard or warm germ: Determines percentage of normal seedlings that develop under ideal growing conditions. The percentage of hard seed or dormant seed is also determined when applicable, and reported as a portion of the total viable percentage.

Noxious Exam* (N): Determines rate of occurrence for any prohibited or restricted noxious weed seeds present in the sample. The presence of weed seeds noxious to South Dakota only are determined in the South Dakota Noxious Exam, while the presence of any weed seed considered noxious somewhere within the continental United States is determined in the USA Noxious Exam. Request USA if seed is to be sold outside of South Dakota. Does not include UGS check.

Seed Count/Pound: The number of seeds per pound is determined for the submitted sample by an electronic seed counter. Included with other test(s) for cereals and soybeans; performed upon request for other crops.

Tetrazolium (TZ): A rapid (24-48 hr) chemical viability test that can estimate the results of the warm germ test; however, it cannot replace the germination test for labeling purposes.

High Performance Liquid Chromatography (HPLC) Variety ID/Verification: A specialized test used to identify/verify wheat, oats, barley, rye, triticale and grass (Poaceae) varieties. This is especially useful for certified seed. Scan the QR code or call for more information.



Cold Test: An excess moisture, field soil and low temperature stress test that determines the vigor level of corn and other crops. The cold test should be conducted in conjunction with a standard warm germ test.

Accelerated Aging (AA): A high humidity, high temperature stress test that is a good indicator of vigor in soybean seed and other crops. The AA test should be conducted in conjunction with a standard warm germ test.

Roundup Ready or CoAXium: Herbicide bioassays that imbibe seeds in/on a diluted concentration of the herbicide before planting. Results are reported as a percentage of tolerant seedlings.

UGS Check: An examination for undesirable grass seed in lawn and turf seed/mixtures as indicated in Delaware, Maryland, New Jersey, Pennsylvania, Virginia and West Virginia State Seed Laws.

*The South Dakota Seed Law, SDCL 38-12A, requires that a complete test (Purity, Germination and Noxious) be obtained before any seed can be sold, offered for sale, or transported for sale.

Our Purpose

We are a public seed testing laboratory in SDSU's Department of Agronomy, Horticulture and Plant Science that tests seed samples for farmers, seed breeders, agronomists and seed companies throughout the USA. As the State Lab, all official testing for the South Dakota Crop Improvement Association (SDCIA), SDSU Foundation Seed Stocks and the South Dakota State Department of Agriculture is conducted here.

The lab is equipped with modern testing equipment necessary to perform tests on all kinds of agricultural crops, grasses, flowers, vegetables and trees. It is staffed with experienced, technically trained and accredited analysts (CSA* and RST**) who train and supervise part-time assistants. All analyses performed by the lab are made according to the Rules for Testing Seeds published by the Association of Official Seed Analysts (AOSA). The report issued by the lab is an official test of the submitted sample.

Certified or Registered Crops

The South Dakota Crop Improvement Association uses the SDSU Seed Testing Lab for testing, but samples must enter their system first. Use the appropriate sampling bags/envelopes/paperwork supplied by the SDCIA (605-688-4604).

*CSA Certified Seed Analyst (AOSA)

**RST Registered Seed Technologist (SCST)

Shipping Address:

U.S. Postal Service:

SDSU Seed Testing Lab
AHPS Department
Box 2100A
Brookings, SD 57007

UPS/FedEx/Spree-Dee:

SDSU Seed Testing Lab
SDSU Innovation Campus
2380 Research Parkway
Brookings, SD 57006



SEED TESTING LABORATORY

Member:

Association of Official Seed Analysts
Society of Commercial Seed Technologists
USDA Accredited Seed Lab (ASL)



SOUTH DAKOTA
STATE UNIVERSITY

Seed Testing Laboratory

Contact Information

Phone: (605) 688-4589

Email: sdsu.seedlab1@sdstate.edu

Website: <https://www.sdstate.edu/agronomy-horticulture-plant-science/sdsu-seed-testing-lab>



Prices effective July 1, 2025

(subject to change)

Obtaining a Sample

To take a representative sample, obtain five to seven subsamples from several areas of the bin using a seed probe. Mix the probed samples and divide them down to the amount needed for testing. DO NOT sample just the top foot of the bin. If the seed is in bags, sample five bags plus 10% of the total number of bags in the lot (i.e. if the lot equals 50 bags, sample 10 bags) and divide that down to the necessary weight for testing.

Account setup and sample submission forms can be obtained on our website. Complimentary sample envelopes are available upon request.

Sample Size for Testing

Small seeded legumes and flowers 1 pint

Cereals, corn or grasses 1 quart

Soybeans and sunflowers 1/2 gallon

By weight, please submit 60 grams (2 ounces) of small grass and clover seed; 150 grams (5 ounces) of alfalfa, flax, foxtail millet and ryegrass; 500 grams (1 lb) of proso millet and sudangrass; 1000 grams (2 lbs) of cereals, vetches and sorghum.

- Please indicate if seed is treated/coated.
- Please package seed (especially soybeans) to minimize damage during transport/shipping.

Additional Laboratory Fees

Cancellation Fee: If a customer decides to cancel a test after the sample has been processed and substantial work has begun in the lab, a fee will be applied.

Palmer amaranth DNA Testing: A third-party facility performs the PCR test to confirm the identity of Palmer amaranth. Per customer request, pigweed seeds found in a sample can be sent out and a postage fee will be applied. The customer will receive the PCR results and bill directly from the third-party facility.

Return Seed: Customers with valuable/limited seeds may request the seeds to be returned after testing is completed. Per AOSA Rules, a minimal amount of seed will be retained for our records, and the remainder will be returned for a small postage fee.

Rush: Samples submitted for analysis are tested in the order in which they are received. Requesting a rush will give that sample first priority ahead of others already in the queue. Note: certain tests require a specific amount of time (e.g. germination).

Cost by Category

Category	Purity ¹	Germ
1	\$22.00	\$25.00
2	25.00 (includes noxious)	26.00
3	26.00	27.00
4	31.00	34.00
5	31.00	38.00
6	52.00/hour	38.00
7	52.00/hour	38.00
8	52.00/hour	²
9	28.00	64.00

¹ Purities requiring ≥ 1 hour to complete are charged \$52.00/hour.

² Sum of individual cost of each component.

Other Testing Charges

Accelerated Aging	27.00
Bulk Exam	25.00
Chlorox Soak	20.00
CoAXium (herbicide bioassay)	35.00
Cold Test	28.00
Moisture Test Air-oven . . . 22.00 Meter	8.00

Noxious:

South Dakota/Individual State	17.00
USA Noxious (Continental USA— excludes AK & HI)	27.00
USA Noxious and UGS	30.00
UGS Check (Undesirable Grass Seed)	27.00
Western States Noxious (AZ, CA, CO, ID, MT, NM, NV, OR, UT, WA, WY)	25.00
Potassium Hydroxide	50.00
Protein Test (wheat, oat, pea, soybean)	10.00
Rough Purity (on chaffy grass, unofficial)	32.00
Roundup Ready (bioassay method)	30.00
Sand Germination	36.00
Seed Count per lb. (free with other test)	8.00
Seed Identification (free to active clients)	6.00
Test Weight	8.00

Tetrazolium (TZ) Testing:

Cereals	39.00
Grasses/Natives	46.00
Others	45.00

Variety ID (HPLC) . . . check our website for price/brochure
Other Tests Available Upon Request

Laboratory Fees

Cancellation	10.00
Hourly	52.00/hour
Pigweed DNA (postage only)	5.00
Return Seed	adjusted for postage
Rush	50.00

Category 1

Buckwheat
Cereals
Flax
Lentil
Millet, Proso
Milo
Safflower
Sorghum
Sudangrass
Sunflower

Category 2

Chickpea
Corn
Field/Garden Bean
Field Pea
Soybean

Category 3

Alfalfa/Clover
Birdsfoot Trefoil
Crownvetch
Lead plant
Lespedeza
Millet, Foxtail
Millet, Pearl
Radish
Rapeseed/Canola
Sainfoin
Turnip
Vetch

Category 4

Bluegrass
Bromegrass
Fescue
Orchardgrass
Redtop/Bentgrass
Reed Canarygrass
Ryegrass
Wheatgrass
Wildrye

Category 5

Alkali Sacaton
Buffalograss
Indian Ricegrass
Lovegrass
Prairie Dropseed
Sand Dropseed
Switchgrass
Teff grass
Timothy

Category 6

Aster
Beardtongue
Blazing Star
Bluestem
Cinquefoil
Coneflower
Creeping Foxtail
Grama
Goldenrod
Hyssop
Indiangrass
Milkweed
Monarda
Muhly
Prairie Cordgrass
Tickseed
Vervain

Category 7

Bulrush/Sedges
Flowers
Herbs
Shrubs
Trees
Vegetables

Category 8

Mixtures

Category 9

Green Needlegrass
(Includes germination and tetrazolium tests per AOSA rules)

If your crop/seed is not listed, call for information.
Appropriate Sales Tax will be added.