

Seed Testing in South Dakota

A public seed testing laboratory is maintained by SDSU to test seed samples for farmers, seedsmen, South Dakota Crop Improvement Association, and the South Dakota State Department of Agriculture. The lab is equipped with modern testing equipment necessary to perform tests on all kinds of agricultural crops, vegetables, trees, grass, and flower seed. It is staffed with experienced, technically trained and accredited analysts (CSA and RST*) and part-time assistants who work under constant supervision. 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 sample submitted.

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 one foot of your bin. If the seed is in bags, sample five bags plus 10% of the total number of bags in the seed lot (i.e. 50 bags; sample 10 bags) and divide sample down to desired weight.

Size of Sample for Testing

Cereals	1 quart
Small seeded legumes and grasses	1/2 quart
Soybeans	1 quart
Non-chaffy grasses	1 quart
Chaffy Grasses	1 quart
Sunflowers	1 quart

- Samples for Seed Certification should be double this size.
- Treated seed must be clearly labeled and treatment must be indicated.

*CSA Certified Seed Analyst (AOSA)
*RST Registered Seed Technologist (SCST)

Appropriate Sales Tax will be added.
Prices are subject to change without prior notice.

Category 1

Buckwheat
Cereals
Flax
Proso Millet
Safflower
Sorghum
Sudangrass
Sunflower

Category 2

Corn
Field Beans
Field Peas
Soybeans

Category 3

Alfalfa/Clovers
Birdsfoot Trefoil
Crownvetch
Foxtail Millet
Lead Plant
Lespedeza
Pearl Millet
Rape/Canola
Sainfoin
Sweetclover
Vetch

Category 4

Bluegrass
Bromegrass
Fescue
Orchardgrass
Redtop/Bentgrass
Reed Canarygrass
Ryegrass
Timothy
Wheatgrass Spp.
(except Western)
Wildrye Spp.

Category 5

Alkali Sacaton
Buffalograss
Indian Ricegrass
Prairie Dropseed
Sand Dropseed
Sand Lovegrass
Switchgrass
Western Whtgr.

Category 6

Bluestems
Creeping Foxtail
Gramas
Indiangrass
Prairie Cordgrass
Prairie Sandreed

Category 7

Bulrush/Sedges
Flowers/Wildflowers
Herbs
Shrubs
Trees
Vegetables

Category 8

Mixtures, samples
with excessive
weed seed, or
any purity samples
taking 1 hour
or more to complete.

Category 9

Green Needlegrass

Cost by Category¹

Category	Purity ²	Germ ⁶
1	\$ 18.00	\$21.00 ⁵
2	21.00 (includes noxious)	22.00
3	22.00	23.00
4	27.00	30.00
5	27.00	35.00
6	42.00/hour	35.00
7	42.00/hour	35.00
8	42.00/hour	3
9	24.00	46.00 ⁴

¹ Purity and noxious testing by ISTA rules are double the shown rate.

² Purities requiring 1+ hours to complete are charged at \$42.00/hour.

³ Sum of individual cost of each component.

⁴ Includes germination and tetrazolium test.

⁵ Cost for planting 8 reps of 50 seed – \$23.00.

⁶ Sand/soil germinations – add \$5.00.

Other Testing Charges

South Dakota Noxious	\$14.00
USA Noxious (Continental USA—excludes AL & HI)	23.00
UGS Check (Undesirable Grass Seed)	26.00
USA Noxious and UGS	32.00
Western States Noxious (CO, ID, KS, MT, ND, NE, NV, SD, UT, WY)	22.00

Tetrazolium (TZ) Testing:

Cereals	\$35.00
Grasses	42.00
Legumes	42.00
Others (Buckwheat, Sunflower, Safflower, Flax)	40.00
Accelerated Aging	23.00
Alfalfa Dodder Check (400g exam)	45.00
Barley Smut Test	45.00
Chlorox Soak	15.00
Corn Cold Test	23.00
Electrophoresis	check online for price/brochure
Fluorescence on Oats	4.00 with purity, 10.00 alone
Moisture Test	
Meter	6.00
Air-oven	18.00
Potassium Hydroxide	40.00
Quick (Rush) Test	40.00
Rough Purity (on chaffy grass, unofficial)	28.00
Roundup Check Alone (bioassay method)	25.00
Seed Count per lb. (Free with other test)	4.00
Seed Fill Check (chaffy types)	17.00
Seed Identification (Free to active clients)	5.00/sample
Soybean Roundup Ready Test (includes standard germination)	38.00
Test Weight	5.00

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 out at the rate of occurrence.

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

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

Tetrazolium Test (TZ): A rapid (24-48 hr.) chemical viability test which can be used to estimate the results of the germination test; however, **it cannot be used as a legal substitute for the germination test.** Results of the TZ test will be phoned, faxed, or e-mailed to the customer when completed.

Accelerated Aging Test (AA): A high humidity, high temperature stress test that is a good indicator of vigor in soybean seed. This test should be conducted in conjunction with a standard germination test.

Cold Test: An excess moisture, field soil, and low temperature stress test that has proven to be useful in determining the vigor level of corn.

UGS Check: A check for undesirable grass seed (on a noxious sample size) in lawn and turf seed/ mixtures as indicated in the Delaware, Maryland, New Jersey, Pennsylvania, Virginia, and West Virginia State Seed Laws.

Rough Purity: An unofficial test to determine purity of uncleaned seed lots. Used primarily for chaffy grasses (i.e. bluestems, etc.) Only $\frac{1}{4}$ of the official purity sample size is tested.

Seed Fill Check: A quick test to determine a rough percent of pure seed in samples of bluestems and Indiangrass taken from unharvested fields. Assists the client in determining if harvest is economically feasible.

Electrophoresis: This test is used to identify/verify wheat, oats, barley, and millet varieties. Call or check online (www.sdstate.edu/ps/seed-lab/upload/Electrophoresis-Testing-Services.pdf) for cost and information on this test.

Seed Count/Pound: The number of seeds per pound will be determined on the sample submitted for analysis by an electronic seed counter. Performed upon request only.

Quick Test (Rush): Samples submitted for analysis are normally tested in the order in which they are received. The request for a quick test will give that sample first testing priority ahead of other samples.

Uncleaned Samples: The seed lab reserves the right to refuse to test screenings or very dirty, unclean samples. If samples of this type are accepted for testing, charges will be assessed at the rate of \$42.00 per hour labor.

Smut Test: Barley smut tests are available on samples sent to the Seed Testing Lab. Research has indicated that a direct relationship exists between the percent of seeds infected with smut and percent of yield loss when infection rates exceed 5%.

*** Required for sale in South Dakota, SDCL 38-12A.**

SEED TESTING LABORATORY



Seed Testing Services Analyst Training Seed Research

Member

Association of Official Seed Analysts
Society of Commercial Seed Technologists

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U.S. Postal Service*

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www.sdstate.edu/ps/seed_lab/index.cfm

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The South Dakota Seed Law requires that a complete test (Purity, Noxious Weed Exam, and Germination) must be obtained before any seed can be sold, offered for sale, or transported for sale.