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, grasses, flowers, vegetables, and trees. 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.

Category 1	Category 2	Category 3	Category 4	Category 5
Buckwheat				

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 (Continental) Noxious Test. Request USA if seed is to be sold out of South Dakota.
D e c de UGS c ec !

Germination Test* (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 present, and reported as a portion of the total viable percentage.

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 emailed 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 and other crops. 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 and other crops. This test should be conducted in conjunction with a standard germination test.

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 1/4 of the official purity sample size is tested.

HPLC Variety ID/Verification: A test to identify/verify wheat, oats, barley, rye, and triticale varieties. Call or check our website under the "Quick Links" section for cost and information. (sdstate.edu/sites/default/files/file-archive/2023-07/HPLC_Information_%26_Fees.pdf)

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/Rush Test: Samples submitted for analysis are normally tested in the order in which they are received. The request for a rush will give that sample first 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 $50.00 per hour labor.

Smut Test: Available on barley samples upon request. 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.**

500 copies were printed by SDSU Agronomy, Horticulture & Plant Science at $.00 each. Pc013 7/23

SEED TESTING LABORATORY

Seed Testing Services
Analyst Training
Seed Research

Member

Association of Official Seed Analysts
Society of Commercial Seed Technologists

Shipping Address using
U.S. Postal Service

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

Shipping Address using
UPS/FedEx/Spee-Dee

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

Contact Information

Phone: (605) 688-4589
Fax: (605) 688-5249
E-mail: sdsu.seedlab1@sdstate.edu
sdstate.edu/agronomy-horticulture-and-plant-science/sdsu-seed-testing-lab

JULY 1, 2023

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.