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Agronomy Seed Laboratory : Its Functions and Services Explained

South Dakota Agricultural Experiment Station

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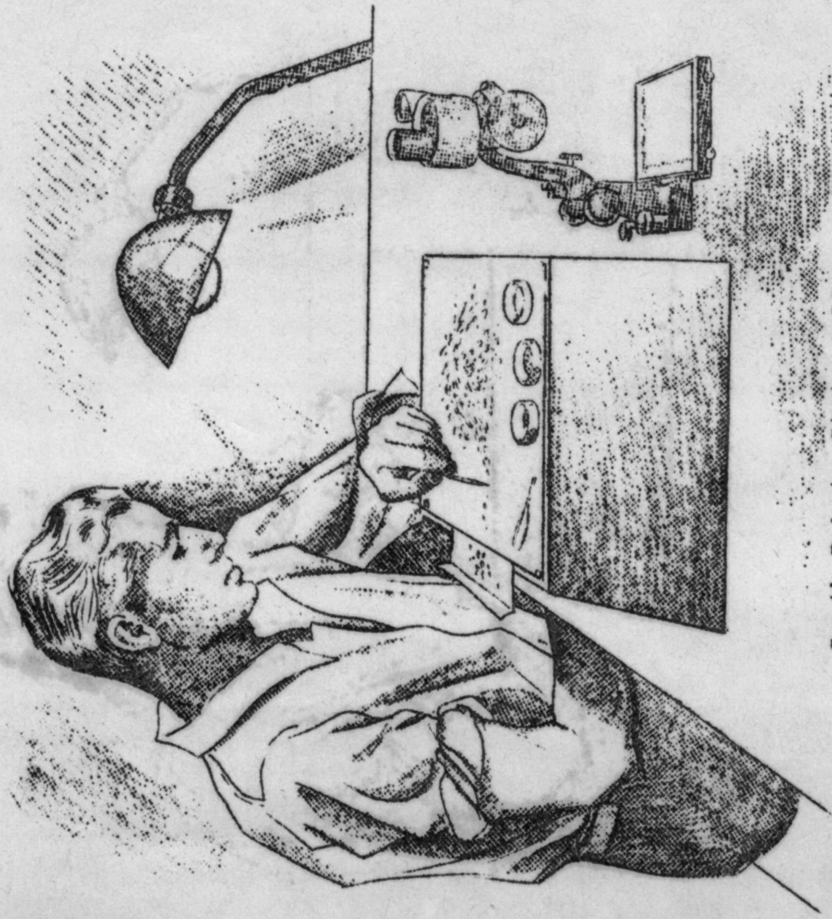
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Agronomy Department
Pamphlet No. 1

January 1944

AGRONOMY SEED LABORATORY

ITS FUNCTIONS AND SERVICES EXPLAINED

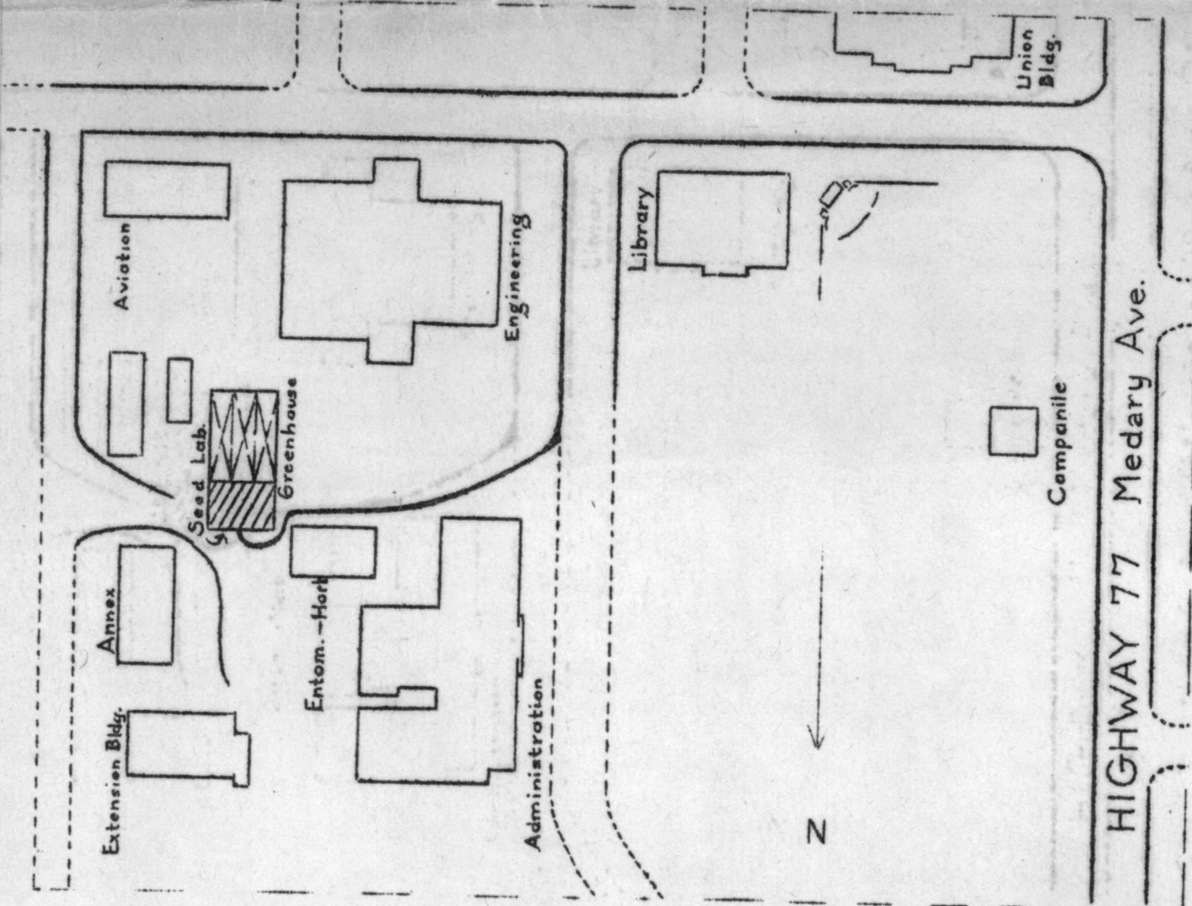


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LOCATION OF AGRONOMY SEED LAB. ON
CAMPUS

Agronomy Seed Laboratory
South Dakota State College
Agronomy Department

January 1944

THE FUNCTIONS AND SERVICES OF THE SEED LABORATORY

By E. L. Erickson, Assistant Agronomist, In charge of the Seed Laboratory

Farmers, seedsmen and others frequently require tests on seed for labeling or for planting purposes. The following information is intended to clarify questions on seed testing work and to explain the services available in the matter of seed analysis.

Farmers Testing Own Seed

Anyone may analyze seed and label such seed accordingly if one is capable of doing such work and has the necessary equipment. Seed laws require that seed be labeled when offered for sale or sold. It really does not matter who makes the analysis as long as the analysis and label are correct, within the limits of normal variation. The information on the label, however, must be correct; if not, the seller is liable for mislabeling.

In some cases farmers can make reasonably accurate germination tests of corn and small grains, etc., for their own information. However, when the label requires the purity percentage, the farmer finds that he has no sensitive scale on which to weigh the separations. It becomes necessary, then, that the farmer, for labeling purposes, have the services of a properly equipped, reliable seed laboratory.

Seed Laboratory Facilities

The seed laboratory is maintained primarily for research and teaching purposes. It is desirable to do service work for farmers, seedmen, and others inasmuch as the equipment is at hand and trained part-time help is available.

Seed Laboratory Service

The Agronomy Seed Laboratory is maintained at the South Dakota State College in the Agronomy Department for the purpose of obtaining information for the people of the state in matters pertaining to the production and use of good seed. The following pages set forth information about the laboratory and the services available.

The Seed Laboratory offers services in the following branches:

1. Seed Analysis

Seed samples will be analyzed on the basis of cost. The analysis will include a purity determination and germination test. Examination for the presence of noxious weed seeds will be made when this service is specifically asked for. In some cases the presence of seed borne diseases can be detected if the sender so desires.

2. Identification

Weed Seeds will be identified and where possible crop variety determination will be made. Plant specimens will be identified when possible.

3. Noxious Weed Seeds

If desired, a large quantity of seed will be examined for seeds of the noxious weeds. This information is required for labeling purposes. All samples should be examined for noxious seeds as a preventive measure.

4. Presence of Seed Borne Disease

In some cases it is possible to determine the presence of seed borne diseases from the germination test.

5. Mottled Seed Determination

In the labeling of white sweet clover seed as to variety it is necessary to state the percentage of yellow blossom seed if such is present.

The Federal Seed Regulations provides that the presence of mottled seed in sweet clover seed indicates the presence of yellow blossom sweet clover. The percentage of mottled seed is determined and this figure multiplied by four to give the percentage of yellow blossom seed present. This information and procedure is based on growing tests of mottled and non-mottled seed.

Mottled seed determinations will be made only when requested.

6. Dockage Tests

It is sometimes desirable or necessary to have dockage determinations made on seed before recleaning. Dockage consists of stems, chaff, broken seed, weed seed, thin and sprouted seed and other material of no value as seed. Such dockage tests are available and will be made only when called for.

Content of Analysis Reports

Reports include information on the following items:

1. Percentage of pure seed.
2. Percentage of other crop seed.
3. Percentage of weed seeds.
4. Percentage of inert material.
5. Kind and approximate number per pound of other crop seed.
6. Name and approximate number per pound of weed seed.
7. Percentage of normal sprouts.
8. Percentage of hard seed, if present.
9. Total germination, including hard seed.

In addition to the foregoing the noxious weed examination, disease reading, mottled seed count in white sweet clover, and dockage tests will be reported when specifically requested.

Cost of Seed Laboratory Service

Cost of the regular laboratory service is as follows:

	per sample
For purity and germination tests-----	\$1.00
Corn germination-----	.50
Noxious weed examination-----	.50
Disease tests-----	.50
Mottled seed determination-----	.25
Dockage tests-----	.25
Malting grade determination-----	.50

Seed which has not been recleaned and which contains much dockage will be given a dockage test. If purity and germination tests of such un-recleaned seed are requested, same will be made and charged for on the basis of time required.

It is sometimes necessary for our patrons to obtain a report on a sample in a few days. A limited number of such samples can be accommodated by the "Quick Service" provision as follows:

Cost of "Quick" laboratory service:

"Quick Service" can be had by paying, in addition to the regular fees, fifty cents per sample.

"Quick Service" means that the purity report will be mailed within two days after receipt of sample and germination report as soon thereafter as possible.

In the event more requests for "Quick Service" come than can properly be handled, the Laboratory reserves the right to handle all samples regularly and duly credit the account.

GENERAL DIRECTIONS

ATTACH CARD OR LETTER SECURELY TO THE SEED PACKAGE AND ADDRESS THE AGRONOMY SEED LABORATORY, AGRONOMY DEPARTMENT, BROOKINGS, SOUTH DAKOTA.

In order to keep the costs of testing at the minimum and to insure prompt service the following system has been established.

Firms and others who send a number of samples per season will deposit \$10.00 with the laboratory. Itemized records will be kept and when the account is exhausted notice will be sent together with the itemized record.

Persons who have few samples analyzed during the year will remit with the sample in check, cash, or money order. In case of overpayment the account will be duly credited. Postage stamps cannot be accepted in payment of Seed Laboratory services.

The foregoing arrangement is established in order to improve the service and to reduce costs by:

- (a) Simplifying the keeping of records.
- (b) Eliminating the necessity of sending statements.
- (c) Eliminating uncollectable accounts.

Obtaining Samples for Analysis

Samples for analysis should be taken only from recleaned seed lots or in the condition in which the seed is to be sold or used. Care should be exercised in obtaining the sample for analysis. The analysis will be based on the sample submitted, hence this sample should truly represent the lot of seed from which it is taken. Nothing should be done to the sample to improve or lessen its quality.

If the seed is in a bin or pile, obtain handfuls from at least seven places by thrusting the hand into the bulk. Collect these handfuls in a clean container and thoroughly mix. Take smaller portions from this quantity again from at least seven places to make up the laboratory sample.

For sampling seed in bags obtain seed from near the bottom, middle, and top of each bag or from no less than seven bags. Obtain laboratory sample as described in the preceding paragraph.

Place laboratory sample in clean, sturdy, and tight container and mail to the Agronomy Seed Laboratory, Agronomy Department, Brookings, South Dakota.

Amounts of Seed Needed

For corn, small grain, soybeans, etc., send one pint to one quart: for sudan, sweet clover, grasses, etc., send one pint.

Sending the Seed Sample

Heavy paper or cloth bags are best for mailing seed. Avoid flimsy or breakable containers. Address - The Agronomy Seed Laboratory, Agronomy Department, Brookings, South Dakota. Place your name and address inside the package also. Label the package "Seed Sample" and do not seal.

When a letter is sent it can be attached to the outside of the seed container. If the letter is placed inside, the entire package will require first class postage.

Tags Available for Labeling Purposes

Farmers who wish to sell their seed may obtain plain tags printed to include the information required. Tags are made available only as a service in helping the farmer label his seed. The above tags do not imply registration but merely constitute a label.

Tags as shown below are available at 1 cent each.

Variety & Kind	_____
Lot No.	_____
Where Grown	_____
Pure Seed	_____ %
Other Crop Seeds	_____ %
Weed Seeds	_____ %
Inert Matter	_____ %
Germination	_____ %
Hard Seeds	_____ %
Total Germination and Hard Seeds	_____ %
Date of Germination Test	_____
Noxious Seeds	_____
Name and Address of Seller	_____ _____ _____