

# AGRICULTURAL GUIDE

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Seed  
testing

## Seed testing services

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The use of quality seed is a must if you are to realize an economic return from crop production. Each year, many farmers save seed for planting or purchase seed from another grower or dealer. Unless this seed is certified or is of known high quality, you should test for potential performance to assure that you'll get the crop off to a good start. This guide provides information on testing services available to Missouri farmers.

### Missouri Seed Control Lab

The State Seed Testing Laboratory functions as a regulatory and service division of the Missouri State Department of Agriculture. It tests seed samples officially taken by Department of Agriculture inspectors. This regulatory function of the seed testing laboratory is necessary for the effective administration of the Missouri seed law. Without the protection of the seed law, the program for good seed would be fatally damaged.

The Missouri seed law provides free testing of agricultural and vegetable seed, which any Missouri citizen may submit. The State Seed Testing Laboratory will test submitted service samples of seed as equipment and analysts' time will allow. You may submit samples any time, but to receive the quickest report, avoid the busy periods of August-September and February-April. The state seed law offers free seed analysis to any citizen using seed not subject to labeling requirements. Seed is subject to labeling requirements if it is sold by anyone other than the person who grew the crop. It is also subject to labeling requirements if it is advertised in regard to its purity or germination. A limit of seven free analyses is allowed per farm family.

The amount of seed needed for a test depends on the test being performed. A noxious weed test will normally require 25,000 seeds; purity tests will be done on 2,500 seeds; and warm germination will require only

Table 1. Volume for about 2,500 seeds.

Crop	Purity and Noxious Weed quantity at least...	Warm germination quantity*
Alfalfa	1 cup	1 cup
Barley	2 cups	1 cup
Clovers	1 cup	1 cup
Corn	3 cups	2 cups
Cotton	2 cups	1 cup
Grasses	2 cups	1 cup
Lespedeza	1 cup	1 cup
Oats	2 cups	1 cup
Rye	2 cups	1 cup
Rice	2 cups	1 cup
Sorghum	2 cups	1 cup
Soybeans	3 cups	2 cups
Trefoil	1 cup	1 cup
Vetch	2 cups	1 cup
Wheat	2 cups	1 cup

\*Cold germination tests are available on request for soybean and corn samples.

400 seeds. The volume of seed that will provide approximately 2,500 seeds is shown in Table 1.

The kind of sample you send is important if the test is to be meaningful. A small sample taken from the top of a bin cannot reflect the quality of the seed at the bottom, or even in the middle of the bin. Instead, take small samples from various locations and depths throughout the bin. Mix these small samples thoroughly and forward a sample of the size state in the table above. Send the sample in a strong container not likely to be broken or torn in the mail. Print plainly on the package your name, address, and the kind of seed. Include this information on a label inside the package along with the tests desired. Mail samples to:

State Seed Testing Laboratory  
Department of Agriculture  
P.O. Box 630  
Jefferson City, MO 65201



## Seed Improvement Association Lab

The Missouri Seed Improvement Association seed laboratory is run primarily for certified seed growers. The association, however, will run service samples on an as available time basis for a charge. The chart below shows laboratory charges as of January 1, 1987. Prices are subject to change without notification.

The non-chaffey grasses include brome, fescue, timothy and orchardgrass. Others will be considered as chaffey grasses, and you will be charged \$12 per hour per sample plus \$10 per germination test.

The laboratory also offers tetrazolium (TZ) tests for small grains, grasses and soybeans with a charge of \$10 per sample tested and \$5 for warm germination. Charges for the accelerated aging test are \$15. The laboratory offers a 100 -seed soybean grow- out test for \$5 for genetic purity and hypocotyl test.

The association seed testing laboratory is equipped to run the endophyte seed staining and grow-out tests. The cost of the seed staining test is \$15 and will be done on 50 seeds. The grow-out test is done on 30 plants, takes at least four weeks and costs \$30. The staining test gives you the percent of endophyte present, while the grow-

out test gives you the percent of live endophyte present. Live endophyte is required by Mississippi in order to sell tall fescue there.

Samples are to be addressed to:

### Missouri Seed Improvement Association

P.O. Box 852  
Columbia, MO 65205

Send them in good strong containers such as cloth bags placed in a cardboard box, use heavy-duty seed envelopes or send in a large metal container. The sample size should be two pounds for large seed grains and soybeans. On grasses and legumes, send about one pint of seed. Please mark your samples for the type of tests you need. Put your name, address and telephone number in the sample container. The association will bill you for these charges. Purity tests will not be made on any sample unless it has been cleaned but not treated.

Several other private laboratories provide services to the farmers of Missouri. Chose only laboratories that have registered seed technologists. The Missouri State Seed Control Lab maintains a list of such individuals in the state.

	Small Grains	Soybeans	Corn	Cotton	Sorghum & Millet	Small Seeded Legumes	Non-Chaffey Grasses	Chaffey Grasses
Purity	\$5	\$5	\$4	\$4	\$5	\$10	\$10	\$12/hour
Warm Germination	5	5	5	5	5	5	5	10
Complete Test	10	10	9	9	10	15	15	