

SAMPLING PROCEDURES FOR SEED TESTING^{1/}

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Abstract.--Seed samples must be representative of the lot for test results to be applicable. The procedures for obtaining and sending the sample and sample size will be demonstrated.

Seed testing results show the quality of the sample submitted for testing. For the results to be useful, the sample must be representative of the entire lot. The sample should also be of the proper size, be properly labeled, and be protected during shipment.

When sampling a lot, equal portions must be taken from evenly distributed parts of the lot, and access must be had to all parts of the lot. A probe or trier, long enough to reach all parts of the drum, should be used to sample free-flowing seed in drums or bulk. To sample with a probe or trier:

1. Close the gates before inserting into the drum.
2. Insert the probe or trier into the drum.
3. Open the gates (let the seed fill the probe or trier).
4. Close the gates.
5. Remove the probe or trier.
6. **Dump the seed out of the probe or trier.**

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When sampling large seed, such as longleaf pine, or non flowing seed, such as sycamore, thrust your hand into the drum to withdraw representative portions. Insert the hand flat and with the fingers together, and keep the fingers together as the hand is closed and withdrawn.

Each sample must be made up of at least five cores or handfuls. When more than one core is drawn from a drum, follow different paths. When more than one handful is taken from a drum, take them from well separated points. For lots of one to six drums, sample each drum and take a total of at least five cores or handfuls. For lots of more than six drums, sample five drums plus at least

10% of the number of drums in the lot. Examples:

Number of drums in the lot	1	2	3	4	5	6	7	10	23	50
Number of drums to sample	1	2	3	4	5	6	6	6	7	10
Total number of cores	5	5	5	5	5	6	6	6	7	10

If a sample (five cores or more) from a lot is too large to send for testing, the sample may be mixed and divided to the proper size. To mix the sample, pour the sample through a riffle (or soil) divider several times (at least twice). Then use the divider to divide the sample into halves, quarters, eighths, etc., to get the proper sample size. In case a divider is not available, the sample should be thoroughly mixed and placed in a pile and the pile should be divided into halves, quarters, eighths, etc., to get the proper sample size.

The sample size depends on the tests requested. For a single germination (including x-ray) and/or a seed per pound test, 600 seed are needed. For a paired test (germination with and without stratification), 1000 seed are needed. For a purity test, 2500 seed are needed. About two tablespoons more are needed for the moisture test. Examples:

Virginia Pine	20 grams	about 1/8 cup
Loblolly Pine	60 grams	just under 1/2 cup
Slash Pine	70 grams	just over 1/2 cup
Longleaf Pine	250 grams	about 3 1/2 cups

A good policy is to send twice the minimum sample size, except for Longleaf Pine, so that some seed will be available to repeat the test if needed.

Proper identification and protection of the sample is important. The sample should be properly labeled and sealed in a moisture proof unbreakable plastic container or bag. Moisture tests samples are especially necessary to be sealed in a moisture proof container or bag. The sample should be packed in a way that will protect it from damage during shipment.

LITERATURE CITED

Association of Official Seed Analysts. 1981. Rules for testing seeds. *J. Seed Technol.* 6(2): 1-126.