

## SAMPLING PROCEDURES FOR THE INSPECTION OF SEED

The certifying agency should be prepared to practice and to suggest the best procedures to be used in sampling seed. No matter how accurately an analysis is made, it can show only the quality of the sample submitted. Therefore, every effort should be made to insure that the sample submitted for testing represents the bulk of the seed to be certified and sold. Whenever possible, samples for testing the uniformity of the seed lot are to be taken in addition to a sample for testing average quality.

All samples for certified seed inspection shall be taken in accordance with the sampling procedures prescribed in the current AOSA Rules for Testing Seed.

1. General Procedures
  - a. To secure a representative sample, equal portions shall be taken from evenly distributed parts of the quantity of seed to be sampled. Access shall be had to all parts of that quantity.
  - b. For free-flowing seed in bags or bulk, a probe or trier long enough to sample all portions of the bag or bulk shall be used.
  - c. Non-free-flowing seed, such as chaffy grass seed, which is difficult to sample with a probe or trier, shall be sampled by thrusting the hand into the bulk and withdrawing representative portions.
  - d. As the seed is sampled, each portion shall be examined. If there appears to be a lack of uniformity, the portions shall not be combined but shall be retained separately for laboratory analysis. If the portions appear uniform, they shall be combined to form a composite sample.
  - e. Composite samples shall be obtained to determine the quality of a lot of seed, such as the percentages of pure seed, other crop seed, weed seed, inert matter, noxious weed seed, germination, varietal purity, freedom from disease, and effectiveness of seed treatment.

2. Sampling equipment

For sampling seeds in bags, a trier long enough to reach all areas in the bag shall be used. The trier shall be designed so that it will remove an equal volume of seed from each part of the bag through which the trier travels. Unless the trier has partitions in the seed chamber it must be inserted into the bags horizontally. Non-free-flowing seeds that are difficult to sample with a trier shall be sampled by thrusting the hand into the seed and removing representative portions. When a sample is taken with the hand, insert the hand flat and with the fingers together. Keep the fingers together as the hand is closed and withdrawn. Because of possible segregation, hand samples should be taken from various locations in bags or in bulk.

3. Obtaining a "representative sample"
  - a. Seed in bags
    - (1) When more than one core is drawn from a bag, follow different paths. When more than one handful is taken from a bag, take them from well separated points.
    - (2) For lots of one to six bags, sample each bag and take a total of at least five cores or handfuls.
    - (3) For lots of more than six bags, sample five bags plus at least 10% of the number of bags in the lot. Round numbers with decimals to the nearest whole number. Regardless of the lot size, it is not necessary to sample more than 30 bags.

Ex:	No. bags in lots	7	10	23	50	100	200	300	400
	No. bags to sample	6	6	7	10	15	25	30	30

- b. Bulk seed - To obtain a composite sample, take at least as many cores or handfuls as if the same quantity of seed were in bags of an ordinary size. Take the cores or handfuls from well distributed points throughout the bulk.

- c. Seed in small containers - Seed in small containers shall be sampled by taking entire unopened containers in sufficient number to supply a minimum size sample as required in Section 4. The contents of a single container or the combined contents of multiple containers of the same lot shall be considered representative of the entire lot of seed sampled.
  - d. Sampling during conditioning
    - (1) Automatic mechanical devices may be used to continually or intermittently draw representative samples as a seed lot is conditioned, or
    - (2) Portions of conditioned seed may be drawn intermittently by hand as seed is conditioned to form a composite, representative sample for a seed lot.
4. Minimum size of submitted sample
- a. For composite sample to test for quality - The following are minimum weights for samples of seed to be submitted for purity, germination and noxious weed seed examination to determine eligibility of a seed lot for certification.
    - (1) Two ounces (approx. 55 grams) of grass seed not otherwise mentioned, alsike or white clover, or seeds not larger than these.
    - (2) Five ounces (approx. 150 grams) of alfalfa, bromegrasses, crimson or red clover, flax, lespedeza, millet. rape. ryegrasses, or seeds of similar size.
    - (3) One pound of proso, sundangrass, or seeds of similar size.
    - (4) Two pounds (approx. 1,000 grams) of cereals, vetches, sorghums, or seed similar or larger size.
    - (5) Vegetable seed samples shall consist of at least 400 seeds per sample. If a purity analysis or a noxious weed seed examination is required, the submitted sample shall provide at least the minimum weights of working samples set forth in AOSA Rules for Testing Seeds.
    - (6) Tree and shrub seed samples shall consist of at least 600 seeds per sample for germination purposes. If a purity analysis or a noxious weed seed examination is required, the submitted sample shall provide at least the minimum weights of working samples set forth in AOSA Rules for Testing Seeds.
  - b. For individual-bag samples to test for uniformity. The size of any individual-bag sample to determine uniformity in a lot of seed shall be not less than the quantities set out as "Minimum weight for noxious weed seed examination" for the respective kinds of seed listed in AOSA Rules for Testing Seeds. If the Sample drawn is larger than required, it shall be thoroughly mixed before it is divided to the desired size.
5. Identification and Forwarding of samples
- Before forwarding representative samples for laboratory analysis, the containers of samples shall be completely and properly identified, including species or crop kind, variety, seed class or germplasm type, grower's name, tests to be performed, and other information as may be requested by the Association.
6. Seed Testing Procedures
- a. All seed shall be tested and analyzed in accordance with the procedures prescribed by the most recent edition of "Rules for Testing Seeds" issued by the Association of Official Seed Analysts (AOSA).