

MSU Extension Publication Archive

Archive copy of publication, do not use for current recommendations. Up-to-date information about many topics can be obtained from your local Extension office.

Proper Seed Sampling Techniques
Michigan State University
Cooperative Extension Service
Lawrence O. Copeland
Extension Specialist, Seeds, Department of Crop and Soil Sciences
February 1975
2 pages

The PDF file was provided courtesy of the Michigan State University Library

Scroll down to view the publication.

By Lawrence O. Copeland, Extension Specialist, Seeds,
Department of Crop and Soil Sciences

All seed must be labeled before it can be advertised and sold for planting purposes. Percent germination, pure seed and weed seed content and other seed quality factors must appear on the label. After cleaning and processing, a representative sample should be submitted to a seed testing laboratory to be analyzed for the required labeling information.

The sample of seed you submit for laboratory analysis must represent the seed as it is to be offered for sale. The most careful and accurate seed analysis will be meaningless if the submitted sample does not represent the entire seed lot to be marketed.

If a seed lot could be blended to complete uniformity a representative sample could be taken from any place in one bag or bulk lot. Since complete uniformity is seldom achieved, several bags and sections of bulk lots must be sampled with a probe or trier to be sure that the sample is representative of the entire lot.

SAMPLING TOOLS

Bag Triers

Hand sampling can be satisfactory, but use of standard seed triers (see Fig. 1) will provide more accurate samples. For clovers and other free-flowing seeds, use a 9-slot, 30-inch "stick" trier with a 1/2-inch outside diameter. Other satisfactory triers have a single slot but should be at least 12 inches in length. One commonly used trier is the "thief trier." This is a 6- or 9-inch probe. While easy to use, it will not deliver a representative sample since it removes seed only from a place immediately inside the bag and above the point of insertion. A standard tube (stick) trier which will reach at least the center of the bag should be used.

Bin Triers

Bin triers are used when samples are taken from trucks, holding bins, or railroad cars. These triers range up to 72 inches in length and 1 1/2 inches in diameter with 6 to 12 slots. The most acceptable probes have compartmental slots.

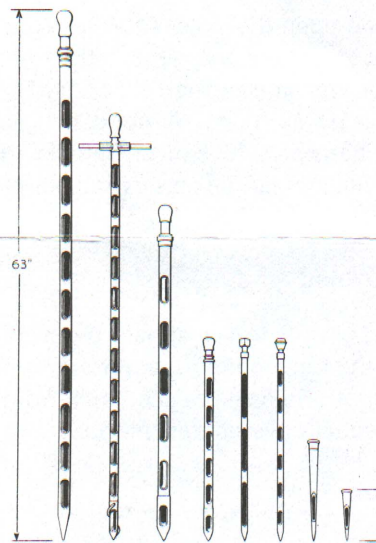


Fig. 1. Probes for sampling from bag and bulk seed. Three longest are bulk probes.

Other Samples

If samples are taken during cleaning or other processing operations, a scoop-sampler similar to an elevator bucket or a mechanical sampling device may be used. Regardless of the sampler used, it must be able to reach an entire cross-sectional area of the seed stream.

SAMPLING METHODS

Sampling from Bags

Place the bag in a horizontal position and insert the trier at one corner of the bag with the slots facing downward (see Fig. 2). When the trier is fully inserted,

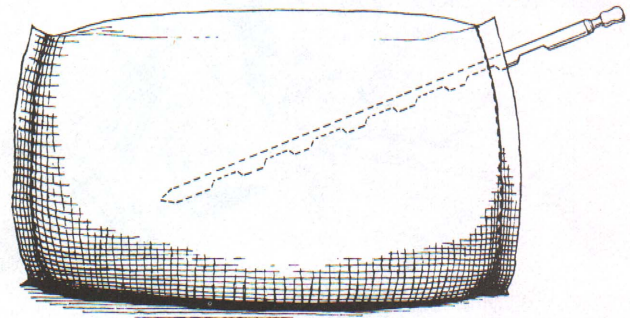


Fig. 2. Proper probing technique for bag sampling.

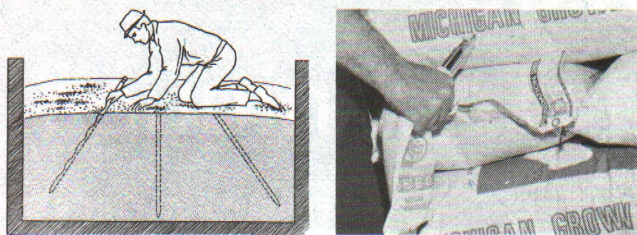


Fig. 3. (Left) sampling technique from bulk seed; (right) sampling from bags.

turn the slots upward and open the slots. After the tube has filled with seed, close the slots and remove the trier.

Sample every bag for lots smaller than six bags. For larger lots, sample at least six bags. A good rule to follow is to sample five bags plus 10% of the remaining bags in each lot. However, it is not necessary to sample more than 30 bags.

Sampling from Bulk Seed

Samples from seed in bins or trucks should be taken from different places—the top, center, near the bottom and on all sides (see Fig. 3). Sample the seed bulk from about seven or more equally distributed places.

Seed Being Processed

Take a small sample at regular intervals from the stream of cleaned seed following the last cleaning operation. The sample can be taken with a hand scoop sampler, or a mechanical sampling device (see Fig. 4) can be installed. Regardless of the technique used, the entire cross-sectional area of the seed stream should be sampled.

After the entire sample has been taken, blend the small samples into a large, composite sample and "halve" it to the proper size for submitting to the laboratory for analysis.

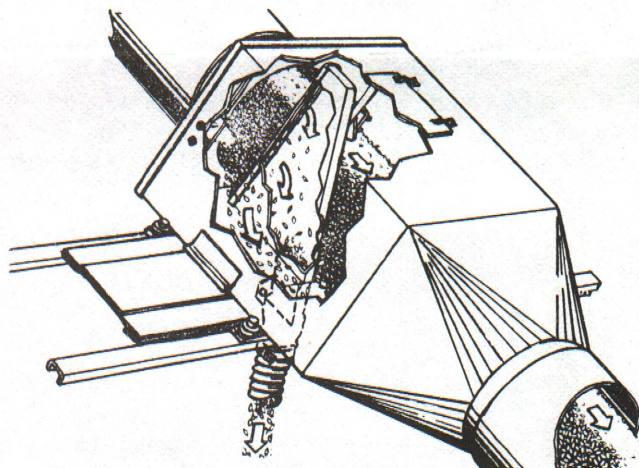


Fig. 4. Mechanical sampling device.

To facilitate labeling needs for certified seed it is sometimes more convenient to submit a sample before the entire lot is processed. It is very important that the submitted sample represent at least 25 bushels of seed processed exactly as the entire lot will be processed. If the sample submitted for analysis was drawn from an incomplete lot, another sample should be drawn after all the seed is processed to confirm analysis results on the incomplete sample.

Sample Size (Minimum)

1. Small seeded grasses and clovers, such as white clover, and seed of similar size—two ounces.
2. Bromegrass and seed of similar size—five ounces.
3. Sudangrass, sorghum and seed of similar size—one pound.
4. Cereals, corn, soybeans, navy beans, and seed of similar size—two pounds.
5. Kidney beans and seed of similar size—three pounds.

Mailing Instructions

Place your sample in a clean, cloth bag, plastic or paper seed packet, cardboard box or other suitable container sturdy enough for mailing. Be sure to send complete information with the sample:

1. Your name and address
2. Crop, variety and if certified, class of seed
3. Tests requested
4. Lot number and number and weight of bags in the lot
5. Kind of seed treatment, if treated
6. Addresses of persons who should receive a copy of laboratory reports

MAILING ADDRESS

Certified Seed

Michigan Crop Improvement Assoc.
Seed Laboratory
P.O. Box 1008
East Lansing, Michigan 48823

Uncertified Seed

Michigan State Seed Laboratory
William Geagley Laboratory
1615 S. Harrison Road
East Lansing, Michigan 48823