

Seed Sampling

Seed must be tested for germination, purity, and weed seed content. Information from tests is necessary for labeling purposes. Seed are usually tested before and after processing. Seed are usually in bulk before processing and usually in bags after processing.

The seed sample taken should be as representative of the lot as possible. If a seed lot were blended to the point that the seed mass was completely uniform, a representative sample could be taken from any place in the lot. Since this is rarely the case, samples must be taken from a number of different places or bags throughout the lot to get a representative sample. This is much more difficult with some seeds than with others and is usually more difficult when seeds are in bulk than when seeds are in bags.

Sampling Tools

Several sampling devices are available and will provide more accurate samples than hand sampling. Bag triers and bin triers or probes (Figure 1) are most satisfactory where most of the areas of the bag or bin can be reached. The small, 30-inch, slotted triers are suitable for bags. Shorter, slotted triers may be used but should be at least 12 inches long. A commonly used trier is a short, 6 or 9-inch, shingle slotted "thief trier." This trier may or may not deliver a representative sample since it removes seed only from the area immediately above the point where it is inserted. A trier that will reach at least the center of the bag should be used. The proper probing technique for bag sampling is shown in Figure 2.

The longer triers (Figure 1) are used for bin or other bulk storage sampling or for taking samples from rail cars. These triers range up to 72 inches in length and up to 1 1/2 inches in diameter. The number of slots will vary up to 12. Triers are available with or without compartmental slots. Those with compartmental slots are preferred for sampling seed. Triers are best suited for free flowing seed. Chaffy or fuzzy seed in bags are difficult to sample and may need to be sampled by hand.

Seed in large warehouses in bins too large to sample with a trier and seed such as gin-run cottonseed in bulk may be sampled with a pneumatic sampler (Figure 5). This vacuum-type sampler will probe to a depth needed for most seed storage facilities. Procedure for sampling seed in bulk is shown in Figure 3.

If samples are taken during processing, a scoop-sampler or automatic sampling device may be used. One type of automatic sampling is shown in Figure 4.

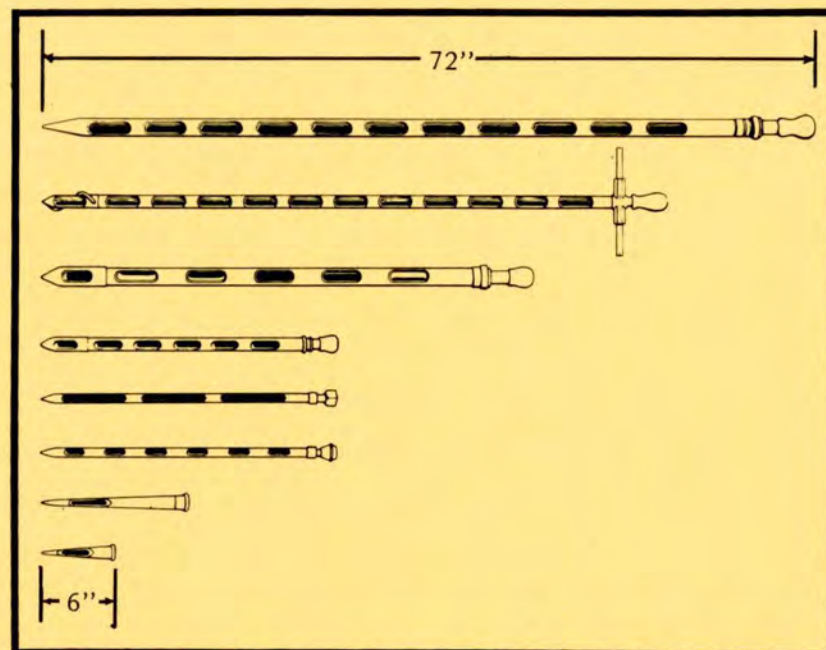


Fig. 1. Probes for sampling seed from bag and bulk. The longest are bulk probes.

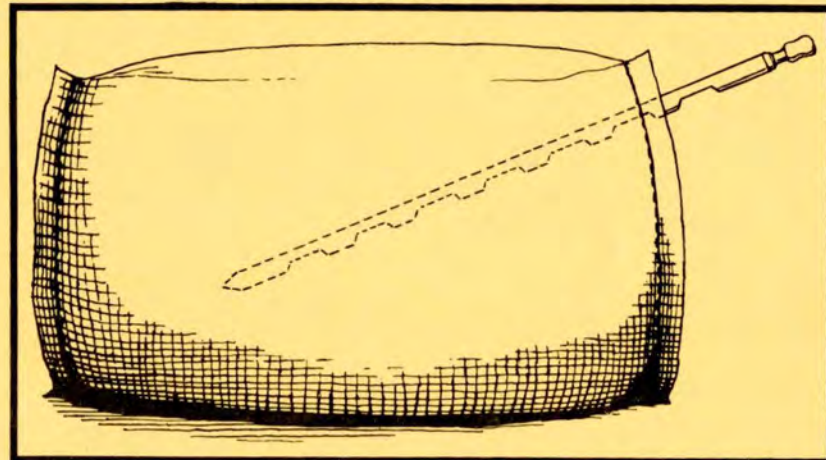


Fig. 2. Proper probing technique for bag sampling.

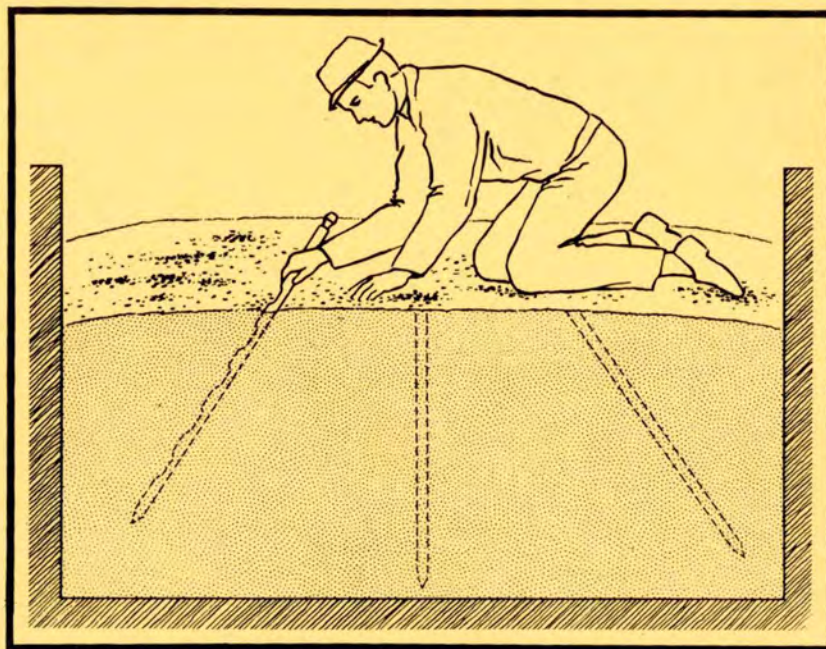


Fig. 3. Sampling bulk seed using probe.

Size of Sample

The number of bags to sample or probes to take depends on the number of bags or size of the lot in bulk. The **Rules for Testing Seed** (*Journal of Seed Technology*, Volume 3, Number 3, 1978) gives specific instructions for sampling seed in bags. "For lots of one to six bags, sample each bag. For lots of more than six bags, sample five bags plus at least 10 percent of the number of bags in the lot. Regardless of the lot size, it is not necessary to sample more than 30 bags." Example:

No. bags in lot	7	10	23	50	100	200	300+
No. Bags To Sample	6	6	7	10	15	25	30

For seed in bulk, the **Rules** state, "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." After the appropriate number of bags have been sampled or cores taken, mix the samples thoroughly by hand and take the samples to be submitted for testing.

Minimum Sample Size

For small clovers and other kinds of similar size, the minimum sample size is 2 ounces (60 grams). For sudan-grass, sorghum-sudan hybrids, and seeds of similar size, the minimum sample size is 1 pound. For soybeans, wheat, oats, rye, rice, vetches, sorghums, or seeds of similar size, the minimum sample size is 2 pounds (1,000 grams).

Sample Identification

Place samples in a clean bag, seed packet, box, or other suitable container. Identify the container with your name and address, crop, variety, test requested, and lot number or identification. Mail the samples to the laboratory for testing. The Mississippi State Seed Testing Laboratory address is P. O. Drawer 5, Mississippi State, MS 39762.

Other private and public laboratories also test seed. Fees for seed testing vary depending on type of test, seed kind, and laboratory.

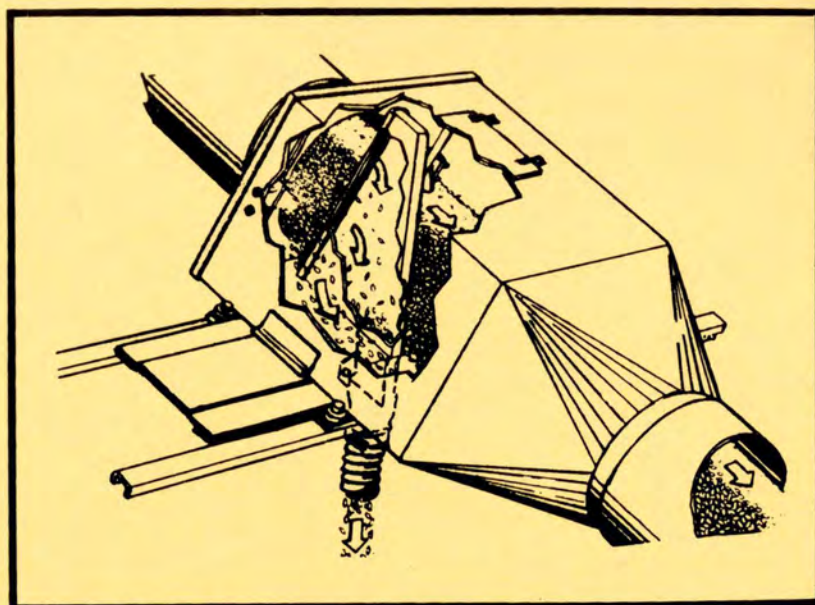


Fig. 4. Mechanical sampling device.

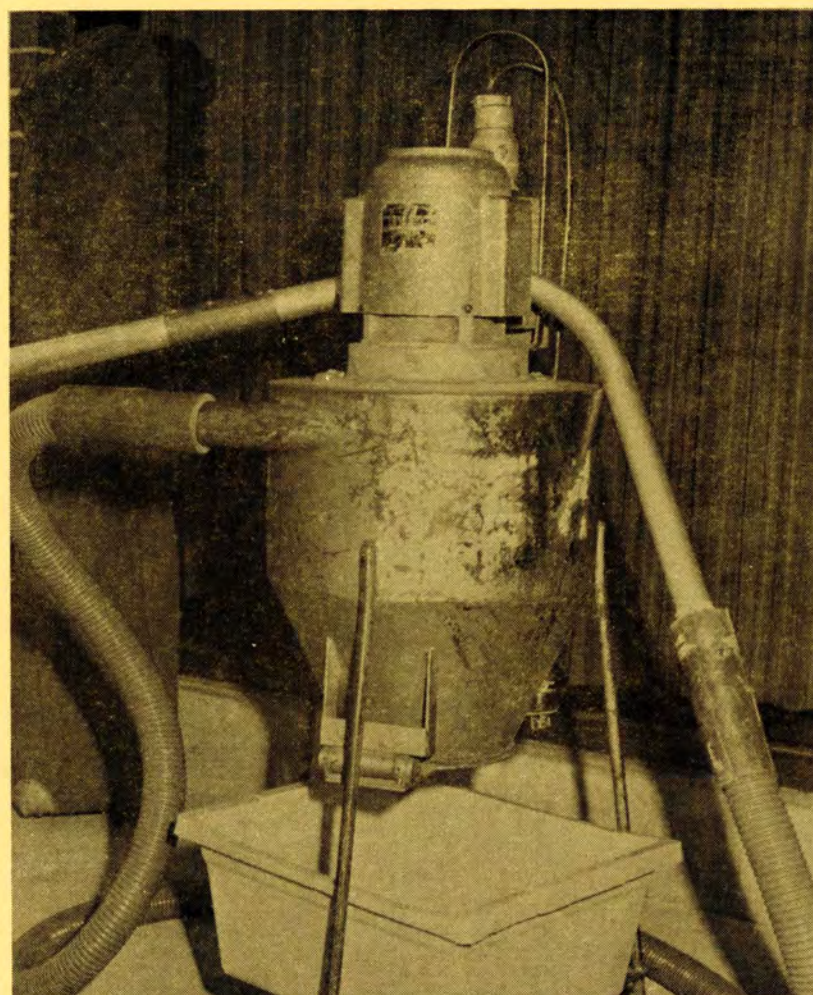


Fig. 5. Pneumatic sampler with collection pan for sampling large quantities of bulk seed.

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