Practical Procedures For Sampling Grain At Farm Sites And Remote Locations

The Importance Of Sampling

Sampling is an essential part of the inspection process and is critical to the accuracy of the final grade. If the sample is not representative of the lot, the inspection result will not reflect the true quality of the lot.

Basic Principles of Obtaining a GOOD sample:

- Collect several samples from different areas of the lot.
- Combine these samples to form a single sample.
- Consider the size of the sample needed for analysis.
- Completely mix or blend the final sample.

Tailgate Sampling

Use a container (a large coffee can will work) to sample grain from a moving stream of grain. Tailgate sampling will draw a reasonably representative sample as grain is loaded/unloaded from a combine to a truck/wagon or from a truck/wagon to a bin.

To Obtain A GOOD Sample With A Tailgate Sampler

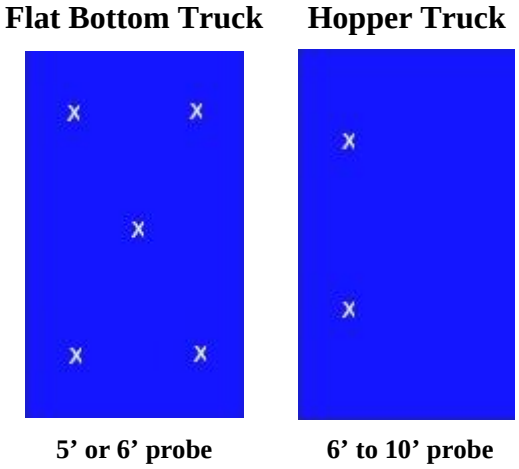
- Let the grain flow from the carrier (truck, combine, bin) for a few seconds before taking your first sample. Avoid sampling the last few bushels flowing out of the container.
- Hold the sampling device so that it is at one side of the grain stream.
- Pull the tailgate sampler through the grain stream in a continuous motion.
- Empty each sample into a clean, dry container.
- Take a minimum of **three** samples per carrier. More samples will yield a more representative composite sample.

Probe Sampling

A hand probe is the only effective method of obtaining a representative sample from grain at rest in a truck bin or other container. There are two types of hand probes - a compartmented probe and an open-throat probe. The open-throat probe does not have compartments inside. This feature allows the sample to be poured directly from the probe into a sample container. The open-throat probe tends to draw more grain from the top portion of the lot. Results of the open-throat probe will differ from that of a sample drawn with a compartmented probe. Hand probes come in 5', 6,' 8', 10', and 12' lengths. The sample is more representative of the lot if the probe reaches the bottom of the carrier.

To Obtain A GOOD Sample With A Hand Probe

- Determine the locations in the container to be probed. Avoid sampling in the spout stream.



- With the slots on the probe closed, insert the probe at a slight angle (10 degrees).

- With the slots facing upward, open the probe and move it up and down in two short motions to fill the compartments.

- Close the probe, withdraw it from the grain and empty the grain onto a canvass or trough that is slightly longer than the probe you are using. If you are using an open-throat probe, pour the grain from the open end of the probe directly into a clean, dry container.

While drawing the sample, observe the general condition of the grain and check for objectionable odors, insect infestation, large stones, pieces of metal or glass and any other potentially harmful conditions.

Getting The Sample Inspected

A grain inspector will need about 2 to 3 pounds of grain for a complete grade. Additional grain may be needed if other criteria factors such as aflatoxin, vomitoxin, protein, falling numbers, are requested.

Submit your sample to an "Official Grain Inspection Agency" to ensure you receive accurate, timely inspection results on your sample. Official grain inspection agencies are authorized by USDA, GIPSA, Federal Grain Inspection Service, to inspect and certify the quality of grain. These agencies use only equipment that is approved and tested by the Federal Grain Inspection Service. Official grain inspection agency employees are licensed and monitored by the Federal Grain Inspection Service.

Click here to locate the "Official Grain Inspection Agency" in your area.

The Bottom Line

By drawing a representative sample and getting an accurate inspection, you will know the true quality of the grain at the time of sampling. The condition of stored grain can change depending on the conditions of the storage area and the quality factors of the stored grain.