

Taking a representative sample from trucks and bins

Sampling trucks to bin storage

To take a representative sample from trucks as they fill a bin, you will need:

Four identical pails that hold a minimum of 20 litres. Two of these pails should be labeled A and 2 pails labeled B.

A grain scoop or sampling ladle

Sealable containers for the final samples

Procedure

1. As trucks unload to a selected bin, take grain samples at consistent and regular intervals to ensure the sample is representative. The length of the interval should be determined at the beginning of the process and should take into account:

Amount of grain that is being moved

Type of equipment you are using

How much sample you need

For example, the larger the auger or the smaller the load of grain, the shorter the interval. It's also very important to keep the sampling interval time consistent throughout the entire process to ensure your sample is representative.

When taking grain samples, alternate between the sides and centre of the grain stream.

Place all the samples for each truck in pail A, ensuring that you have at least enough sample to fill the pail to three-quarters full.

2. Once the truck is finished unloading, mix the contents of pail A thoroughly by hand. Place the 2 empty pails labeled B, side by side and touching on a level surface. Pour the contents of pail A at the point where the pails touch, ensuring that each pail receives about half the sample. Return 1 pail of sample to pail A. The contents of the other pail can be poured back into the bin.

Repeat this process with the remaining sample until you have approximately 2 kilograms of sample left. Place the final sample into the remaining pail labeled A.

3. Repeat the procedure for each truckload of grain that is going into the same bin.
4. When the bin is full, thoroughly mix the contents of pail A by hand and reduce the sample as outlined in Step 2. Keep in mind that for most purposes, you will need enough grain to make 1-kilogram samples.
5. Place the final sample or samples in sealed containers and label each container to show the bin it represents.

Preparing a composite sample of multiple bins

To prepare a composite sample from multiple bins, select a single sample that represents each bin and combine them in a pail. Mix the sample thoroughly and reduce it as outlined in Step 2. For most purposes, you will need enough grain to make 1-kilogram samples.

Sampling a grain bin

To take a representative sample at the farm from a grain bin, you will need:

1. Four identical pails that hold a minimum of 20 litres. Two of these pails should be labeled A and 2 pails labeled B.
2. A grain scoop or sampling ladle
3. Sealable containers for the final sample or samples
4. A representative bin sample requires the sampling of the entire bin.
- 5. Procedure**
6. As the grain streams out of the bin, take grain samples at consistent and regular intervals to ensure the sample is representative. The length of the interval should be determined at the beginning of the process and should take into account
 - a. Amount of grain that is being moved
 - b. Type of equipment you are using
 - c. How much sample you need

For example, the larger the auger or the smaller the load of grain, the shorter the interval. It's also very important to keep the sampling interval time consistent throughout the entire process to ensure your sample is representative.

When taking grain samples, alternate between the sides and centre of the grain stream.

Place all the samples for each bin in pail A, ensuring that you have at least enough sample to fill the pail to three-quarters full.

1. Mix the contents of pail A thoroughly by hand. Place the 2 empty pails labeled B, side by side and touching on a level surface. Pour the contents of pail A at the point where the pails touch, ensuring that each pail receives about half the sample. Return 1 pail of sample to pail A. The contents of the other pail can be poured back into the bin.

Repeat this process with the remaining sample until you have approximately 2 kilograms of sample left. Place the final sample into the remaining pail labeled A.

2. Place the final sample or samples in sealed containers and label each container to show the bin it represents. Keep in mind that for most purposes, you will need 1-kilogram samples.

Preparing a composite sample of multiple bins

To prepare a composite sample from multiple bins, identify the bins to be sampled and determine how much sample you will need from each bin to fill pail A to three-quarters full. Sample the bin as outlined in Step 1. Reduce the sample as outlined in Step 2 to the desired quantity and combine with other samples in pail A. Once you're finished sampling all bins, thoroughly mix the composite sample and reduce it as outlined in Step 2. Keep in mind that for most purposes, you will need enough grain to make 1-kilogram samples.

Important Notes

Grades are based on samples. To ensure samples adequately reflect the entire lot of grain, proper sampling procedures must be used.

The quality of grain harvested from several areas of an apparently uniform field can vary greatly, both in grade and protein level. This means that during harvest, grade and protein can vary from truckload to truckload. As a result, grain quality can vary both within a bin, and from bin to bin.

The key to having dependable and representative samples is sampling often and thoroughly mixing and dividing down the selected sample. Equipment used at a grain handling facility usually copes with variable quality by taking multiple samples or by using a sampling process that takes samples at regular intervals.

Definitions

Composite sample

A composite sample is composed of a number of distinct portions, each obtained in a prescribed manner from consecutive samples. The portions are blended to make the composite.

Representative sample

Grades are based on samples. To ensure samples adequately reflect the entire lot of grain, proper sampling procedures must be used.

Information compiled by Intertek in June 2012, based on material accessed from the Canadian Grain Commission Website.

Link to this website information is

<http://www.grainscanada.gc.ca/guides-guides/rs-er/trs-per-eng.htm>

This document prepared on June 7, 2012 by:

[Neil Tipples](#)

Operations Manager
Winnipeg
Intertek Industry and Assurance
Inspection and Laboratory Services
973 St. James Street
Winnipeg, Manitoba, Canada, R3H 0X2
Tel No. +1 204 944 1887
Fax No. +1 204 942 0334
Mobile No. +1 204 688 6849
Email: neil.tipples@intertek.com
www.intertek.com