

# Sampling Guide: Manure



Accurate manure analysis depends on correct sampling and handling procedures. Care and consistency are important when developing a sampling routine. Remember, you are trying to take a sample that represents the entire batch.

The following techniques for various types of manure will help ensure a representative sample.

## When to Sample

Remember to allow for enough time to take the sample, have it analyzed, review the results and determine application rates. Nutrient concentrations in stored manure are relatively stable, so a difference in weeks from sampling to application should not be critical. The greatest concern would be in seasonal variations. Comparing samples collected in the spring to samples collected in the fall is not recommended. Manure analysis should be conducted relatively the same time each year.

## Sample Size

Use the one-half pint container provided by AgSource or a one pint plastic container filled to only half-full. Freeze the contents and ship it early in the week to ensure timely delivery to the laboratory. **Glass containers are not accepted.**

## Techniques for Sampling

**Semi-Solid from Spreader** – Collect a composite sample from several areas of the spreader(s) and thoroughly mix the composite samples using a plastic pail or wheelbarrow.

**Solid Manure from a Stack** – Take samples at least 18 to 24 inches into the stack or storage from 6 to 10 locations. Mix sample thoroughly.

**Liquid Agitate** – Pit or holding area for a minimum of 2 to 4 hours. Then, using a small bucket with a cover on a pole, collect a composite sample from 6 to 10 different areas of the pit. Thoroughly mix the composite sample by pouring back and forth between two 5 gallon pails four to five times.

**Effluent Lagoons** – Obtaining a representative sample from a lagoon is difficult. As with a slurry pit, solids will stratify with time. How the sample is collected must be correlated with how the manure material is to be pumped and applied. For example, if the lagoon is pumped from only the top layer without any agitation, you should only sample from that same top portion. As with the slurry pit, it is best to agitate to fully mix the lagoon and take subsamples as described.

## Handling

It is important to note that manure is a biologically active material. Changes in nutrient values will begin to occur as samples are transferred into sample shipping containers. Therefore, it is best to collect the samples and send them to the laboratory the same day. Do not let manure samples sit in hot areas such as a dashboard for any period of time. If expedited shipping cannot occur, it is suggested to refrigerate or freeze samples until the time they can be shipped. Clearly label all containers and include a laboratory identification sheet with each sample.



## Sample Submission Forms

To ensure proper analysis, carefully fill-out the sample submittal form completely. One form per sample. Include sample identification and select analysis to be performed.

## Preparing Sample for Shipping

AgSource offers sampling containers and mailing boxes upon request. All samples should be frozen. Place the frozen sample jar inside the provided zip-lock plastic bag in the shipping box along with the information sheet.

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