

GUIDELINES FOR SAMPLING MANURE

Manure and wastewater sampling is messy and unpleasant. When sampling, acknowledge this fact and prepare ahead of time to collect the samples. Use rubber boots and gloves (if necessary), proper sampling tools (described below), clean buckets, and heavy-duty plastic bags or jars to ship the sample.

Manure is highly variable. In order to obtain a representative sample of manure or wastewater you will have to collect several small *subsamples* and combine them together into *one composite sample*. Follow the guidelines below for sampling solid and liquid manure sources.

Sampling Solids

When sampling manure solids, *remove the surface 6 to 8 inch crust* from the pile. Use a clean auger, probe, or shovel to *core into the pile as far as possible* and retrieve a subsample. Take samples from all sides, collecting *a minimum of six subsamples* from each pile. Place the subsamples into a clean bucket and mix well. Transfer approximately one pound (2 to 3 pints volume) of manure into a heavy duty, sealable plastic bag. Double bag the sample, mark the bag in pen with the sample identification, and place in a cooler or freezer. Ship the sample to the analytical lab as soon as possible. *Do not dry the manure sample before shipping* since the lab must determine moisture content in order to report manure nutrient values on an “as is” basis.

Sampling Liquids and Slurries

There are three ways to sample liquids and slurries:

1. Sample directly from the storage structure using a water sampler. A simple water sampler can be constructed by mounting a tin can on the end of a wooden dowel or old broom handle. Walk around the structure and collect a minimum of six subsamples of the liquid. If possible, mix or otherwise agitate the liquid prior to sampling.
2. Sample from a valve inserted in a recovery line or directly from the structure outlet. Collect a minimum of six subsamples, two at the beginning, two at the middle, and two at the end of the pumping cycle.
3. Place cups or cans in the field to collect manure as it is applied through a sprinkler system. Place a minimum of six cans in the field to collect the subsamples.

Combine the liquid subsamples in a clean bucket and mix thoroughly. Transfer approximately 1 to 2 pints of liquid into a clean sample jar. Label the jar with the sample identification. Pack the samples carefully to prevent breakage. Ship the sample to the analytical lab as soon as possible.

Presentation of Results

Results will be adjusted for the moisture content of the sample as it was submitted to the lab and presented on an “as is” basis (pounds per ton for solids, pounds per 1000 gallons or pounds per acre-inch for slurries and liquids). Additional information on interpreting a manure and wastewater analysis will be included with your test results.

MANURE ANALYSIS INFORMATION SHEET

USU Analytical Labs
 Ag. Science Room 166
 4830 Old Main Hill
 Logan UT 84322-4830
 Phone: (435) 797-2217 or Fax: (435) 797-2117

Date: _____
Name: _____
Address: _____

County: _____
Phone: _____
Fax: _____

	Sample number		
	1	2	3
Sample ID:	_____	_____	_____

Manure type (✓)			
Milking cows	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heifer/dry cows	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Beef feeder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calves	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sheep	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Horse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turkey, grower	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Swine, grower	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Swine, sow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Poultry, pullet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Poultry, layer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	_____	_____	_____

Comments: _____

	Sample number		
	1	2	3
Storage system (✓)			
<i>Solid</i>			
Bunker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stacked	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Open lot scrape	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Slurry/liquid</i>			
Pit or tank	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pond (<6 feet)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pond (>6 feet)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Compost</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Length of storage (✓)			
0 to 3 months	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 to 6 months	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 to 12 months	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12+ months	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bedding included (✓)			
Yes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bedding type:	_____		
Present results in:			
lb/ton (solids)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
lb/1000 gallons	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
lb/acre-inch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Test	Price per sample
Total elemental composition: N, P, K, Ca, Mg, Na, S, B, Zn, Cu, Fe, Mn; moisture, pH and salinity (EC)	\$35.00

Please enclose a check or money order payable to **USU Analytical Labs** to cover analytical costs, along with samples and this sample description sheet. Mail samples to the address above.