



Fecal/Manure Sampling Instructions for Pennsylvania Feed Management Planners

Materials Needed

Gloves, arm-length breeding sleeve, bucket, 2 cup plastic container with screw-top lid

Basic Sampling Procedure

1. Select the number of cows to sample (see table, Guidelines for Sampling Groups of Animals, on second page of these instructions)
2. Follow Approach 1, 2 or 3 listed below for sampling protocol. Take a handful of manure from each cow following protocol listed and place in a bucket.
3. Mix the manure in the bucket thoroughly to ensure a representative subsample may be obtained.
4. Take approximately 2 cups of the well-mixed manure sample and place in a plastic screw-top container. Leave about ½ inch of air space in the container and screw the lid on tightly.
5. Send sample for analysis to a certified manure testing laboratory.

Recommended Approaches for Collecting Feces/Manure

Note: There are several approaches that can be used to collect feces. It is important that the same approach be used each time samples are collected. Please include in the feed management plan the approach that was used.

Approach 1 - Sampling cows in free stall systems by consultant

1. In most cases, as you walk into the free stall barn, cows will stand up and defecate. Collect the appropriate number of samples and try to keep bedding contamination to a minimum.
2. For dry cows and heifers, animals should be restrained to keep both people and animals safe. Rectum fecal samples may need to be taken.
3. Check that there are no bulls in the free stall

Approach 2 – Sampling cows in a tie-stall barn by consultant

In tie-stall barns it may be necessary to take fecal samples from the rectum in order to get the distribution of days in milk.

Approach 3 - Sampling cows in free stall systems by producer

1. If the herd is on a routine herd check program and the producer is agreeable to taking fecal samples while animals are restrained, the consultant can explain the basic protocol for taking fecal samples.
2. It will be extremely important that samples be refrigerated or frozen if they cannot be mailed out immediately.
3. If heifers and cows are on a breeding synchronization program, fecal samples could also be taken at this time.
4. If at all possible, the producer needs to follow the protocol for “sampling groups of animals” (see table on next page).
5. It is recommended that the consultant fill out the paper work and take care of getting samples mailed out, unless the producer is willing to do the extra work.

Guidelines for Sampling Groups of Animals				
Animal Group	Feeding System	Number of cows to sample	Max Cows to Sample per group	Sampling Recommendations
Lactating Cows	One group feeding system-one ration for all cows	15 % of cows in group (example: 60 cows in group, sample 9-10 cows)	20	Sample 7.5 % of cows between 70 and 150 days in milk and 7.5 % of cows 151-250 days in milk
Lactating Cows	Multi-group feeding system-different ration for each group	15 % of cows in group (example: 60 cows in group, sample 9-10 cows)	20	Avoid sampling cows that are very fresh (< 30 days milk) and stale (> 300 days in milk).
Dry Cows	-	15 % of cows in the group or, at a minimum, 5 cows	-	Avoid sampling cows that have been dry less than 7 days or are due to calve in 7 days.
Heifers	-	15 % of heifers in group or, at a minimum, 5 heifers	-	Sample heifers that are of similar age and on the same ration.
Animals on pasture	-		-	Ideally, animals should be restrained and samples taken via the rectum. If restraint is not possible, fecal samples need to be fresh and void of insect contamination

If you have questions or need additional information, please contact Virginia Ishler (vai1@psu.edu)