



## Fecal Starch Fact Sheet

### Use of Fecal Starch

The measure of fecal starch is used to examine the extent of starch digestibility. Starch digestibility can be affected by:

1. Particle size – poorly ground or processed grain will have a negative impact on starch digestibility
2. Corn silage processing – related to the above, poorly processed kernels in corn silage can result in lower digestibility. Use the Corn Silage Processing Score (CSPS) as an additional analytical tool to monitor particle size and starch availability.
3. Moisture content – drier grain in corn silage (>35%DM) tends to be less digestible.
4. Fermentation – will enhance starch digestibility over unfermented corn. Additionally, digestibility continues to increase in storage for 4 – 6 months after ensiling.

**Interpretation of Fecal Starch** – Fecal starch results are reported as a percentage of the dry matter.

Fecal Starch, % DM	Interpretation
< 3 %	Starch digestion is good and there is no need to investigate starch sources
3 – 5 %	Total tract starch digestibility (TTSD) is 93% or better. May have some opportunity to adjust rations or management practices.
> 5 %	Starch digestibility can be improved, individual sources of starch should be investigated

### How to collect a sample for fecal starch

**Keep samples cool. If shipping takes 2 or more days, freeze the sample before shipping.**

Group Sample – taken to represent a group of cows that are receiving the same diet.

1. Randomly select 8 to 10 cows in the group
2. Grab a fresh rectal sample from each cow
3. Combine individual samples in a clean bucket and mix together
4. Subsample 2 cups of the mixed sample
5. Cool or freeze sample
6. Select analysis and ship:
  - a. (181) NIR Fecal Starch, \$12 - cattle only
  - b. (182) Wet Chemistry Fecal Starch, \$19 – all species

Individual Cow Samples – taken to examine the distribution of animal performance in a group

1. Randomly select 8 to 10 cows in the group
2. Grab a fresh rectal sample from each cow
3. Place 1 to 2 cups of the individual cow sample in its own sample container
4. Cool or freeze samples
5. Select analysis and ship:
  - a. (181) NIR Fecal Starch, \$12 - cattle only
  - b. (182) Wet Chemistry Fecal Starch, \$19 – all species