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Interpreting Corn Silage Processing Scores (CSPS)

The Corn Silage Process Score (CSPS) was developed by Dr. Dave Mertens, formerly of the USDA Forage Research Center as a tool to define the adequacy of kernal processing by forage harvesters. In addition, the CSPS is a tool that defines starch particle size and can be used to forecast ruminal and total-tract corn silage starch digestibility. Dr. Randy Shaver from the University of Wisconsin estimates about a two-pound milk loss when corn silage is inadequately processed compared to adequately processed.

Approximately 600ml of an air-dried corn silage sample is placed in a Ro-Tap shaker for 10 minutes at 278 oscillations per minute. The shaker “taps” the top sieve 150 times per minute to create an aggressive shaking action. Material that passes through the 4.75mm sieve is collected and analyzed for starch content and compared to the original starch content of the corn silage sample. The percentage of the total starch that passed through the 4.75mm sieve is reported as the “Corn Silage Processing Score (CSPS)”.

Dr. Mertens provides the following interpretation of the CSPS, the percentage of starch passing through the coarse 4.75 mm screen:

Interpretative Data:	<u>Corn Silage Processing Score</u>	<u>Comments</u>
	> 70.00 %	Optimally Processed
	50.00 to 70.00 %	Adequately Processed
	< 50.00 %	Inadequately Processed