

Corn Silage Kernel Processing Score (KPS) Guidelines and Benchmarks

Summarized by Dr. John Goeser, PAS & Dipl. ACAN Revised March, 2017

% Corn Silage Starch that Passes Through a 4.75mm Screen

Industry Guidelines		Rock River Laboratory % of Samples in Each Range
Optimum	> 70%	22.5%
Average	50 - 70%	55.0%
Below Average	< 50%	12.5%

Rock River Laboratory Database	
Average	64.4%
Min	51.9%
Goal	>76.0%

2016 Crop Year	
Average	66.0%
Min	55.5%
Goal	>76.4%

2015 Crop Year	
Average	65.8%
Min	52.4%
Goal	>77.5%

2014 Crop Year	
Average	65.7%
Min	53.8%
Goal	>77.4%

2013 Crop Year	
Average	63.3%
Min	44.6%
Goal	>72.5%

2012 Crop Year	
Average	56.9%
Min	33.0%
Goal	82.0%

2011 Crop Year	
Average	57.0%
Min	38.0%
Goal	80.0%

2010 Crop Year	
Average	56.8%
Min	37.1%
Goal	78.0%

Note: Ferreira (2002), Ferreira and Mertens (2005) and Mertens (2005) developed the KPS analytic technique and found KPS related to *in vitro* silage digestibility. Rock River Laboratory dries, then vigorously shakes the silage using a RoTap Shaker, separating the kernels and starch. Crop year defined as samples submitted during July 1 prior year to July 1 current year.

References

Ferreira, G. 2002. Nutrient evaluation corn silage: Chemical and Physical characteristics of corn silage and their effects on in vitro disappearance. M.S. Thesis (Ch. 3) Univ. of Wisconsin-Madison.

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Mertens, D.R. 2005. Particle size, fragmentation index, and effective fiber: Tools for evaluating the physical attributes of corn silages. Proc. 2005 Four-State Dairy Nutr. And Management Conf. pg 211-220.