Total Tract Neutral Detergent Fiber (TTNDFD) University of Wisconsin Genuine NDF Digestibility Tool Guidelines

Developed by Prof. David Combs, Univ. of WI – Madison, Dairy Science Dept. Validated by three Journal of Dairy Science articles (References listed below) Licensed from the Univ. of WI - Madison

Eastern, Midwest and Western US Forages

Commercial forage data summarized Jacob Karlen & John Goeser, PhD Revised Nov. 2020

	TTNDFD, % of aNDF		
Feed Type	Goal	Average	Min
Alfalfa Hay or Haylage	50.6	44.5	38.5
Corn Silage	47.0	41.8	36.7
Grass Hay or Silage	54.0	46.5	39.0
Mixed Forage	54.0	46.5	39.0
Sorghum, Sudan, or Small Grain Hay or Silage	53.0	43.2	35.2

Note: Rock River Lab Standardized in vitro rumen NDF digestion measures (Goeser et al., 2009) for 24, 30 and 48h NDFD and uNDF240 values are used within the TTNDFD prediction.

Our guidelines were set from population statistics from 4+ years of data with n= > 450,000 samples analyzed. Goal and minimums represent 85th and 15th percentiles, respectively.

References

- Combs, D.K. 2013. TTNDFD: A new approach to evaluate forages. Proc. 2013 Cornell Nutrition Conf., Syracuse, NY.
- Goeser, JP, P.C. Hoffman, and D.K. Combs. 2009. Modification of a rumen fluid priming technique for measuring in vitro NDF digestibility. J Dairy Sci. 92:3842-3848.
- Lopes, F., D.E. Cook, D.K. Combs. 2015. Validation of an in vitro model for predicting rumen and total-tract fiber digestibility in dairy cows fed corn silages with different in vitro neutral detergent fiber digestibilities at 2 levels of dry matter intake. J Dairy Sci 98:574-585.
- Lopes, F., K. Ruh, and D.K. Combs. 2015. Validation of an approach to predict total-tract fiber digestibility using a standardized in vitro technique for different diets fed to high-producing dairy cows. J Dairy Sci. 98:2596-2602.
- Lopes, F., D.E. Cook, D.K. Combs. 2015. Effects of varying dietary ratios of corn silage to alfalfa silage on digestion of neutral detergent fiber in lactating dairy cows. J Dairy Sci.

