

Ruminant Nutrition: Dairy: Minerals, Vitamins, and Other Stuff

792 **Characterizing the effect of Amaferm on forage NDF digestibility.** J. E. Nocek*¹ and H. Jensen², ¹*Spruce Haven Farm and Res. Ctr, Auburn, NY*, ²*Biozyme Inc., St Joseph, MO*.

Amaferm is a fermentation extract shown to stimulate ruminal bacterial and anaerobic fungal growth and enzymatic activity. Our aim was to evaluate the effect of Amaferm on extent and rate of ruminal NDF digestion from a random samplings of corn silage, haylage and hay . Samples (~75 each) of corn silage, haylage and hay of various NDF concentrations and digestibilities were subjected to in situ digestion. Limited sample size restricted cow numbers and rumen residence times used. Two lactating, ruminally cannulated cows (40–120 DIM) were used to determine rumen digestibility: one received control diet only with no Amaferm, the other received the same diet with Amaferm. A standardization procedure with grass hay was used to evaluate cow variation before and after Amaferm supplementation. Rumen polyester bag residence times were 12, 24 and 36 h which allowed time point calculation of rumen NDF disappearance and linear digestion rate determination. Grass hay DM digestibility was not ($P > 0.10$) affected by cow in time. Twelve and 24 h of ruminal incubation of corn silage demonstrated no difference in residual NDF between Control and Amaferm. However at 36 h, Amaferm supplementation resulted in a 8.2% increase ($P < 0.01$) in NDF disappearance, which translated into an increased (15.2%, $P < 0.01$) rate of corn silage NDF digestion. Amaferm supplementation had little effect on Hay NDF digestion at 12 h, however, at 24 h of ruminal exposure, NDF disappearance was higher (11.5%, $P < 0.05$) with Amaferm supplementation. Haylage NDF disappearance at 12, 24 and 36 h was increased by 13.3, 12.6 and 10.0% respectively with Amaferm supplementation. Linear NDF rate of haylage digestion was 16.6% higher ($P < 0.01$) with Amaferm supplementation compared with Control. In summary, Amaferm affected NDF digestibility differently for each forage type evaluated. All forage types tested experienced a significant enhancement in extent of NDF digestibility at some point through 36 h of ruminal exposure when supplemented with Amaferm.

Key words: forage, fermentation extract, NDF digestibility