How Does NDF Digestibility Vary With Cutting?

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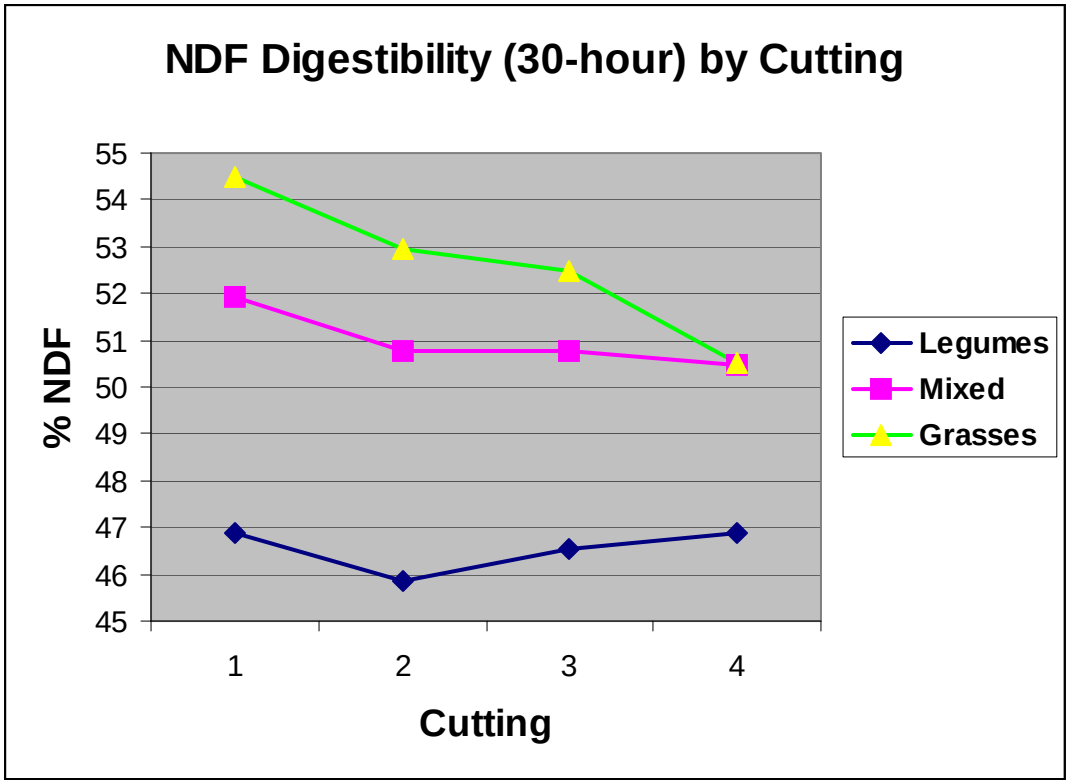
Many factors influence NDF digestibility. Legumes have less total NDF but due to greater lignification, have lower NDF digestibility. Grasses have less lignin and large ranges in maturity contributing to a large range in NDF digestibility. As plants mature, fiber content increases and NDF digestibility decreases. Warmer weather promotes lignification and reduces NDF digestibility. Light (or daylength) promotes photosynthesis and glucose production, having a positive effect on overall plant digestibility. In the northeast U.S., we have a daylength of 15 hours and 20 minutes in May vs. 14 hours and 49 minutes in July and 13 hours and 48 minutes in August.

We analyzed a set of 30-hour NDF digestibility data from legumes (13261 samples), mixed grass/legumes (10158 samples), and grasses (2407 samples). This data was all based on NIR. We looked at how NDF digestibility varied according to cutting.



There was a significant effect of cutting on NDF digestibility in all three groups of forages (legumes, mixed legumes/grasses and grasses) with 1st cutting being significantly higher than 2nd and 3rd cutting in NDF digestibility ($P<0.05$). In mixed legumes/grasses and grasses, 1st cutting was significantly higher than 4th cut in NDF digestibility as well.