

- P183 Fractional outflow rates of rumen ingesta components in dairy cows.  
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Rumen outflow rates were estimated for Co-EDTA, Cr-NDR, indigestible (ICWC), digestible cell wall components (DCWC) and N in two experiments involving 5x5 and 4x4 cows and treatments. Feeding was twice daily and concentrates to roughage ratio was 2.0 and 1.5 in experiment 1 and 2. Treatments were feed intake level and concentrate composition. Outflow rates for Co-EDTA and Cr-NDR were estimated from exponential decline curves (in rumen and faecal concentration respectively) after a pulse dose in the rumen; rates for CWC and N were based on the ratio between faecal output, corrected for postruminal digestion, and rumen pool size. Mean outflow rates were 2.5, .9, 1.1, .4 and 1.2 fractions/day for Co-EDTA, Cr-NDR, ICWC, DCWC and N. Increasing feed intake increased outflow rates of Co-EDTA, ICWC, DCWC and N linearly with .10, .02, .01 and .03 per kg of DM. Cr-NDR overestimated outflow rates of DCWC and undegraded feed N. Rate of degradation of DCWC was estimated as the difference between rate of intake and outflow rate. Mean degradation rate was 1.4 fractions per day, which was 1.75 times that based on nylon bag studies.

- P184 Cell wall components as digestion markers in dairy cows.  
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Dairy cows (5) were offered diets containing 67% concentrates, varying in starch content, at 5 levels of intake. In a second trial cows (4) were fed diets with 60% dry or wet concentrate ingredients, supplemented or not with iso-acids. Feed and faeces were analysed for rumen indigestible NDF(RINDF), cellulase indigestible ADF (CIADF), Klason lignin (KL), potassium permanganate soluble (SKL) and insoluble (IKL) lignin, potassium permanganate insoluble ash (PIA), Cr-NDR and Co-EDTA. Average dry matter digestibilities based on KL and SKL were considered too low; those based on PIA too variable. Correlations between digestibilities based on different markers were poor, except for Cr-NDR, Co-EDTA and CIADF, where they varied from .5 to .8. Reduction in apparent dry matter digestibility due to increased intake was reliable only for Cr-NDR, Co-EDTA and CIADF. It is concluded that Cr-NDR, Co-EDTA and CIADF are suitable for estimating dry matter digestibility, but that RINDF, lignin fractions (KL, SKL, IKL) and PIA are poor markers.

- P185 Mobile nylon bag technique for estimating post-ruminal digestibility in dairy cows.  
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To clarify questions on the use of the mobile nylon bag technique (MNBT) for estimating nutrient digestibilities in the postruminal digestive tract. A trial was conducted with two Holstein cows fitted with T-type duodenal cannulae. Samples of milo starch and soybean protein were placed in small nylon bags of differing sizes (30 x 50, 30 x 75 and 30 x 100 mm) with a pore size of 50 microns. Bags were sealed and inserted into the small intestine through the duodenal cannulae using curved forceps at one bag every 5 minutes. Each animal received 6 bags per day. Upon recovery from feces, bags were washed in cold tap water prior to determination of DM. After drying at 60 C in a forced air oven for 24 h, bags plus contents were weighed. Passage time from the duodenum to feces was estimated by infusing Cr<sub>2</sub>O<sub>3</sub> into the duodenal cannulae at the same time as bags. Passage time (h) for the bags of the three sizes was 21.4 (for 30 x 50 mm), 18.8 (30 x 75 mm) and 17.6 (30 x 100 mm). Disappearance of DM was 99.7% and 96.5% for soybean protein and milo starch, respectively. This technique allows for rapid estimation nutrient disappearance from post-ruminal digestive tract, and all bag sizes appeared satisfactory. 1) Professor of ESAL-Lavras, Minas Gerais, Brazil, 2) Pesquisador of CNPq.