that the extent of inhibition was related to substrate concentration. With the exception of the lowest pH (5.2), where liberation of PUFA was more inhibited, liberation of all fatty acids from SO was roughly inhibited to a same extent by lowering pH. Overall hydrogenation of liberated fatty acids was not affected by pH. Linolenic and linoleic acid were always almost completely hydrogenated, suggesting that hydrogenase action was much less influenced by pH than lipase activity, whereas, in agreement with literature data, C18:1 accumulation was observed.

* Research financed by IWONL, Brussels

Ruminal and hindgut digesta kinetic parameters in sheep estimated from faecal-marker excretion and slaughter trials.
A de Vega, J Gasa *, C Castrillo, JA Guada *(Dpto de Producción Animal y Ciencia de los Alimentos, Miguel Servet, 177, 50013 Zaragoza; * present address: Dpt de Producio Animal, Universitat Autónoma de Barcelona, Bellaterra 18193, Barcelona, Spain)*

Faecal-marker excretion curves after a pulse dose of reference substances have been used to estimate digesta kinetic parameters through the different mixing compartments of the gut, although there is a lack of agreement on their interpretation. In order to better understand this subject, an experiment was carried out on 4 pairs of twin Rasa Aragonesa ewe lambs fed a chopped (C; 44.8% digestible organic matter (DOM)) or pelleted (P; 40.9% DOM) lucerne hay at 90% of their voluntary intake (65 and 88 g DM/kg body weight$^{0.75}$) and offered in 12 daily equal meals. Animals were single dosed 10 g of Yb-labelled forage and 0.5 g of Co-EDTA, and 19 faecal samples were taken for up to 144 h. Slow (K_1) and fast (K_2) fractional outflow rates were obtained from the marker concentration curves using the multicompartmental model. After a 2-d resting period and for 5 consecutive days, daily doses of 6 g of Yb-labelled diets and 0.2 g Co-EDTA were given by mouth in 12 separate distributions at intervals of 2 h. Pairs of animals were slaughtered every 2 h on the 6th day, and fractional outflow rates of both markers from reticulo-rumen (Kr) and hindgut (K_{HG}) calculated for each animal. Calculations were made using the hourly infusion of markers and their actual amounts in the compartments. The latter were estimated from digesta marker concentrations and the total amount of material present in the pools considered. Mean K_1 values were 0.056 (diet C) and 0.077 (diet P) h^{-1} for Co-EDTA ($P < 0.001$) and 0.049 (C) and 0.057 (P) h^{-1} for Yb-labelled diets ($P > 0.05$). K_r value were 0.072 (C) and 0.154 (P) h^{-1} for Co-EDTA ($P < 0.01$) and 0.040 (C) and 0.063 (P) h^{-1} for Yb-labelled particles ($P < 0.05$). Average K_2 values were 0.445 (C) and 0.627 (P) h^{-1} for Co-EDTA and 0.309 (C) and 0.405 (P) h^{-1} for Yb, whereas K_{HG} values were always lower than K_2 and nearly constant (0.138 ± 0.012), independently of the marker or the kind of diet considered. In conclusion, K_1 did not reflect the differences in Yb fractional outflow rates from the rumen between C and P, while in the case of Co-EDTA differences of K_r due to diet were much higher than differences in K_1. K_{HG} values were independent of K_2 with both markers.

Evaluation of faecal indicators to predict voluntary intake of *Dichantium sp* by cattle in Guadeloupe.
M Boval [1], A Xandé [1], JL Peyraud [2], G Aumont [1], O Copry [1], B Calife [1] *([1] INRA, Station de Zootechnie, BP 1232, 97185 Pointe-à-Pitre Cedex, Guadeloupe; [2] INRA, Station de Recherches sur la vache laitière, 35990 Saint-Gilles, France)*

The faecal index method has been widely used for estimating digestibility. Single sward regression equations are more accurate than general equations. The objective of this study was to establish a reliable regression between organic matter digestibility (OMD) of *Dichantium* (dominant in native pastures) and *in vitro* digestibility (IVD) or faecal indicators: crude protein (CP), neutral detergent fiber (NDF), acid detergent fiber (ADF), and residual nitrogen in ADF (N_{ADF}). Bands of fresh forage were cut from 20 to 70 d of regrowth, and chopped. Six creole calves weighing 256 ± 32 kg were housed in metabolic cages (with *ad libitum* access to water and a mineral supplement) and were fed 80 percent *ad libitum* twice daily Measurements were carried out during 50 d after a 3-week adaptation period. Offered forage, refusals and faeces were weighed every day for each animal. Samples were dried at 80°C, during 48 h for forage and 72 h for faeces. Dry matter