



William J.F. Tulley BVM&S
CertCHP MANCVS MRCVS

The Evidence Group, Rural
Enterprise Centre, Redhills,
Penrith, CA11 0DT
United Kingdom

willtulley@ebvc.eu

CURRENT PERSPECTIVES ON SUBACUTE RUMEN ACIDOSIS

Subacute Rumen Acidosis (SARA) is considered to occur in a large proportion of dairy herds, with a within herd prevalence of between 0 and 40% (Kleen and Cannizzo 2012); and is believed to be a causative factor in the development of lameness, body condition loss, reduced feed conversion efficiency, diarrhoea and milk fat depression. SARA is classically defined as short recurrent periods of moderately depressed ruminal pH to between 5.6 and 5.2, caused by ingestion of excessive fermentable carbohydrates, with subsequent recovery due to the animals own physiologic responses (Lorenz). The standard adopted for herd level diagnosis was established by Garrett et al (1999), whereby if three or more animals from a group of twelve are found to have a rumen pH of 5.5 or less, based on samples collected by rumenocentesis; the population at risk is considered to be suffering from SARA.

More recent research has questioned the validity of using pH as a sole indicator of rumen dysfunction caused by excessive fermentable carbohydrate or lack of dietary fibre (Calsamiglia et al 2012; Bramley et al 2008); yet few other diagnostic aids are currently available to the veterinary practitioner. This presentation describes current understanding of SARA and an appropriate methodology for the investigation of suspected rumen dysfunction in dairy herds.

References

- Kleen JL, Cannizzo C. Incidence, prevalence and impact of SARA in dairy herds. *Animal Feed Science and Technology* 2012;172, 4-8
- Lorenz I. Subacute Ruminant Acidosis. In *Merck Veterinary Manual*; <http://www.merckvetmanual.com/digestive-system/diseases-of-the-ruminant-forestomach/subacute-ruminal-acidosis> . Accessed 22 Feb 2017
- Garrett EF, Pereira MN, Nordlund KV, Armentano LE, Goodger WJ, Oetzel GR. Diagnostic Methods for the Detection of Subacute Ruminant Acidosis in Dairy Cows. *J Dairy Sci* 1999;82, 1170-1178
- Calsamiglia S, Blanch M, Ferrett A, Moya D. Is subacute ruminal acidosis a pH related problem? Causes and tools for its control 212: 172, 42-50
- Bramley E, Lean IJ, Fulkerson WJ, Stevenson MA, Rabiee AR, Costa ND. The Definition of Acidosis in Dairy Herds Predominantly Fed on Pasture and Concentrates. *J Dairy Sci* 2008;91, 308-321