

FIELD INVESTIGATION OF SUBACUTE RUMEN ACIDOSIS PREVALENCE IN WALLOON DAIRY HERDS.

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Abstract

INTRODUCTION

Subacute ruminal acidosis (SARA) has been considered as a major metabolic disease in high producing dairy herds for years. For instance, out of 737 cows from Wisconsin farms, 20% exhibited ruminal pH values lower than 5.5, allowing diagnosis of SARA, while 23% of animals were considered at risk with ruminal pH values between 5.5 and 5.8. These findings were corroborated by further studies in Europe. However, different feeding practices and herd's production levels are found in Wallonia, requiring evaluation of SARA prevalence. Several local herds were investigated considering that a herd is positive for SARA if 25% of the selected cows had pH values lower than 5.5.

MATERIAL AND METHODS

174 cows (164 Holstein and 10 Brown Swiss) out of 24 walloon herds were sampled from 2011 to 2012 for evaluation of their ruminal function. Selection of minimum 5 cows per herd was made on basis of days in milk (<150 DIM), or low milk fat % (F <3.2%), or fat/protein % (F/P≤1), or at farmer's request (animal debilitated or chronically ill). Ruminal fluid was sampled 4-8 h after feeding using a Geishauser oro-pharyngeal probe, preventing saliva contamination. pH was measured by a portable pHmeter and values were reduced by 0.35 as proposed by Duffield (2004) because of the higher pH values in reticulum sampling site compared with rumenocentesis. Redox potential was determined by Methylene Blue Reduction Time (MBRT) and protozoa assessed by microscopy. Production values were obtained by the National Dairy Herds Improvement. Health scores were determined as described by Zaaier *et al.* (2001).

RESULTS

Mean production values ± SD of these animals (DIM: 106 ± 84) were 33.2 ± 8.9 kg milk, F = 3.47 ± 0.72%, P = 3.25 ± 0.25%, F/P = 1.07 ± 0.23. Mean BCS was 2.6 ± 0.6.

Mean pH value ± SD was 6.50 ± 0.42. 10 animals (5.7%) from 6 herds were below 5.8, of which 4 cows from H8 (23 sampled cows). No result was < 5.5.

MBRT was 4.16 ± 3.13 min. In 5 cows, value < 1min indicated a more amylolytic bacterial flora. In 24 samples, no reduction of MB occurred, demonstrating bacterial inactivity.

Disappearance of large protozoa was observed in 6 samples, of which 5 abnormal specimens came from H8.

No correlation could be found between low pH values and F/P or %F.

CONCLUSION

In no herd, prevalence of SARA was >25%. Regarding these results, ruminal flora inactivity seems far more common than SARA in tested herds.