



Larkmead Veterinary Group

Dairy Cow Newsletter

August 2006

Acetonaemia/Ketosis

The following letter appeared in last week's Veterinary Record. We thought it a very useful summary and mirrors our own experiences this summer. We reprint it with the permission of David A Whitaker MRCVS, of the Edinburgh Dairy Herd Health and Productivity Service (DHHPS).



There is an unusually high rate of clinical ketosis/acetonaemia in dairy cows this summer. High yielding cows in early lactation are notoriously difficult to manage to their potential productivity – especially their fertility efficiency – when at grazing. Energy intake is the constraint, and ketosis is the tip of the iceberg of such energy problems. Farmers may recognise this because of loss of body condition but they often react by trying to feed more concentrates in the parlour. Unfortunately, this does not work! It is possible to feed 3-4 kg as an absolute maximum at each milking, and this is not enough to supplement what can be achieved from grazing for a high yielding cow. Ten hours a day are required for lying down and rumination, 3-4 are occupied around milking and only 10 are left for grazing. When there is enough grass, a modestly yielding cow (or

one passed the peak of lactation) may meet her needs from grazing and parlour feed, but a high yielder hardly ever does and ketosis is only the tip of the iceberg of the consequences.

Buffer feeding with good quality, conserved forages, mixed freshly every day with some concentrates to increase and spread the load, can make a useful contribution, but not if offered at or after afternoon milking, as is common practice. That inhibits grass intake during the potentially highest intake period of the day – the evening. Buffer doesn't work for early lactation cows if given a choice - to take it offered in the field or to wander in and out. The best time for the cows to eat buffer is from about midday, finishing 20-30 minutes before milking. Then everyone gets their share – provided there is enough space for everyone to eat at once. We cannot say for certain that this time is better than after morning milking because we have not tested the difference by trial but early lactation cows, who have just eaten 3-4 kg of concentrates in the parlour, are unlikely to go straight to eat buffer.

Keeping cows in overnight and feeding a total mixed ration is often practiced and may work, but not if the grazing during the day is not good and plentiful. Then the outside period is wasted good eating-time! Cows should perhaps then be kept in totally if they are not to suffer from excess condition loss, ketosis and poor fertility. If housing conditions are good, there is no need to have blue skies overhead for the sake of principle, at the risk of ill health and poor productivity.

There is an additional hazard for farmers, arising from the regular bulk milk urea measurements they receive. During the summer these are quite commonly low; not because of a dietary shortage of effective rumen degradable protein (ERDP) but rather because of a good balance between ERDP and fermentable metabolizable energy (FME) in the rumen. Then there is little ammonia formed and so blood and milk urea levels are low. Feeding additional protein under such circumstances is capable of making a marginal negative energy balance into a big one – apart from being a waste of money.

When bulk milk urea is low because of dietary deficiency of ERDP, cows will under-perform, not lose body condition and tend to have stiff dung. Veterinary surgeons in farm practice are urged to caution their clients at all times from reacting without consultation to bulk milk urea results.

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