

Metabolic Profiles in Dairy Cows



- ◆ Metabolic profiles look at the nutritional balance of key groups of animals within a herd. Although often requested in response to a problem with production, health or fertility, they are more valuable as part of a planned proactive health programme.
- ◆ Correctly applied, metabolic profiles are a useful tool for assessing dietary energy, protein, mineral intake, copper status and the presence of sub-clinical disease. Common problems include energy deficit in early lactation, fat mobilisation syndrome and excess dietary protein.
- ◆ There can be a number of reasons for abnormalities in key test results which can only be interpreted accurately with a good understanding of conditions on the farm, hence it is vital that your veterinary surgeon is closely involved with the collection of samples and the selection of specific tests.

Guide to Sampling

Selection of cows to sample:

- 6 cows from early lactation (10-20 days post calving)
- 6 cows mid lactation (>100 days)
- 6 dry cows (5 - 14 days pre calving)

Timing:

- May/ June when grass is of optimum quality to provide baseline data
- July/ August for summer calving herds to assess adequacy of nutrition for high yielders
- Autumn grazing to highlight potential problems due to over estimation of the quality of autumn grass
- Winter feeding, 2 to 3 weeks after start of the winter diet
- After any major feeding change

- Rules:** 2 to 3 hours after any major concentrate meal
2 weeks after dietary change

Essential Information

Cow i/d, calving date, condition score, milk yield, milk quality, lactation number, disease history and dietary information should be gathered for each cow sampled.

Samples Required

Serum (clotted blood)

(plus heparinised whole blood for GSH-Px)



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