



FarmLab

DIAGNOSTICS

ASSESSING METABOLIC PROFILES IN COWS DURING THE TRANSITION PERIOD

The metabolic profile analysis at FarmLab Diagnostics assesses a number of parameters which are outlined below. We advise that 15 cows are sampled from each herd.

- ▶ 5 cows pre-calving (within 10 days of calving)
- ▶ 5 recently calved cows (from 3- 14 days post calving)
- ▶ 5 cows mid to late lactation - where possible

INTERPRETATION OF RESULTS

- ▶ NEFA* and BHB** values often show poor correlation in the transition period, i.e. elevated values of one may not be extrapolated for the other, with NEFA values often rising before BHB values (McCarthy et al, 2015). NEFA is generally accepted as a better predictor of negative health associated risks (Opsina et al, 2013). Such risks include reduced pregnancy rates and reduced milk yields.
- ▶ BHB levels $> 1.2\text{mmol/l}$, in recently calved cows, are associated with subclinical ketosis and can also indicate an increased risk of other transition period diseases such as displaced abomasum (Chapinall et al, 2011).
- ▶ NEFA values $> 0.3\text{mEq/L}$ in pre-calved cows are a risk factor for retained foetal membranes and development of metritis (Chapinall et al, 2011).
- ▶ NEFA values $> 0.5\text{mEq/L}$ in recently calved cows are a risk factor for the development of displaced abomasum.
- ▶ Reduced calcium levels - $< 2.0\text{mmol/l}$ in recently calved cows - are indicative of subclinical hypocalcemia and are a risk factor for the development of displaced abomasum (Chapinall et al, 2011).
- ▶ Low albumin levels - $< 25\text{g/L}$ in post partum cows - are associated with anovulation and reduced submission rates (Krause et al, 2014).

* Non Esterified Fatty Acids

** Beta hydroxybutyrate

REFERENCES

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Gateway to
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