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Thank you very much from your KRAIBURG research & development

WAYS TO EVALUATE FEEDING

If the feed ration is not mixed correctly or if a cow does not eat the calculated feed quantity (lameness, being pushed away at feeding place, lack of appetite) **metabolic disorders** can be the result. **More often claw diseases and lying injuries (e.g. at the hock joint) are the consequence.** Several simple characteristics specifically indicate possible feeding and feed intake problems on-site in the cubicle house and for individual animals - in this case it is probably best to seek advice from a veterinarian or a feeding consultant. Here are a few examples (source: Malkow-Nerge/Tischer, 2008):

1) Rumen fill

This evaluation is done standing on the left hind side of the animal.

- rumen fill score 1 (paralumar fossa sinks in more than a handwidth deep) → **alarming**
- rumen fill score 2 (paralumar fossa sinks in one handwidth deep) → **alarming**
- **rumen fill score 3 (rumen is rounded out in an apple shape and feels solid, paralumar fossa still visible) → desirable for lactating cows**
- rumen fill score 4 (no paralumar fossa visible) → desirable for cows at the end of lactation
- rumen fill score 5 (no visible transition from the flank to the rib) → desirable for dry cows and heifers

2) Ruminating behaviour

This can be assessed by counting the number of times several high yield dairy cows chew their cud.

- reduced ruminating activity → indicates crude fibre deficiency, can result in rumen acidosis
- at least 40 %, but better when 60-65 % of the cows are ruminating in their cubicles
- **they should chew their cud at least 50 times before swallowing**

3) Faeces consistency

Faeces mirror digestion and indicate whether e.g. the nutrients are well utilized, the water supply is sufficient, if there is too much or too little fibre or protein intake.

- score 1 (very liquid, curved stream of faeces) → alarming
- score 2 (thin pulpy faeces with little pat formation) → alarming, can indicate too much protein or not enough crude fibre
- **score 3 (2-4 plate size pats, 3-4 cm high, which stick to the tip of your boot) → desirable**
- score 4 (5-8 cm high pats, as well as solid chips > 8 cm high) → with lactating cows indicates an unbalanced ration (too little energy, too little protein) or water deficiency

4) Milk ingredients

- The **milk fat content** reflects the fibre supply. **Goal: > 3.8 % (Holstein Friesian)**
- The **milk protein content** reflects the energy supply. **Goal: > 3.3 % (Holstein Friesian)**
- The **fat-protein ratio** is indicative of health status and crude fibre supply.
 - With freshly lactating cows a F/P > 1.5 indicates energy deficiency (ketosis?)
 - With freshly lactating cows a F/P < 1.0 indicates a fibre supply deficiency (acidosis?)
- The urea content reflects the protein to energy ratio.
 - Urea content > 30 mg/100 ml → in the herd: too little energy
 - Urea content < 15 mg/100 ml → in the herd: too little protein, for the individual animal: bad feed intake
 - **Optimal: urea content 25 mg/100 ml**

Important: Not the correctly calculated ration is significant, but most importantly the real feed intake. In addition to painful claw diseases, the layout of the feeding table, feed manger management, animal-feeding place ratio, the water supply, as well as the eating behavior and many more factors make a big difference!