

C1 – Feeding

On the majority of farms milk production data is easily available and can be used as a first screening or for monitoring the feeding on the dairy farm. Sometimes blood sampling has to be performed to more reliably confirm the diagnosis. Completing this checklist will give you a first impression of the feeding on the

farm. The thresholds for fat, protein and lactose % and urea concentrations mentioned in this checklist may be different in different countries, breeds and herds. Therefore these guidelines should be adapted to local circumstances.

Ketosis

| Milk | Yes | No |
|---|-----|----|
| Is the fat % > 5% in > 20% of fresh cows (< 50 days in milk)? | | |
| Is the fat % minus the protein % > 1.5% in > 20% of fresh cows (< 50 days in milk)? | | |
| Is the lactose % < 4.5% in > 20% of animals? | | |

| Plasma | Yes | No |
|--|-----|----|
| Is the BHBA ¹ concentration in multiple animals > 1200-1400 µmol/l? | | |
| Is the BHBA concentration in multiple animals > 2500 µmol/l? | | |
| Is the NEFA ² concentration in multiple animals < 0.3-0.4 mmol/l 2 weeks before or 2 weeks after parturition? | | |
| Is the NEFA concentration in multiple animals < 0.1 mmol/l after 4 weeks after parturition? | | |
| Is the NEFA concentration in multiple animals < 0.6 mmol/l around parturition? | | |

| Subclinical rumen acidosis | Yes | No |
|--|-----|----|
| Is the fat % < protein % and is the fat % < 4.0% in > 20% of cows? | | |
| Is your fat % < 3.8% in > 20% of cows? | | |
| Is the lactose % < 4.5% in > 20% of animals? | | |

| Protein feeding ³ | Yes | No |
|---|-----|----|
| Is your bulk tank urea concentration regularly < 20 mg/kg milk? | | |
| Is your bulk tank urea concentration regularly > 30 mg/kg milk? | | |

¹ BHBA= β -hydroxy-butyric acid, > 1200-1400 and < 2000 µmol/l is subclinical ketosis, > 2500 µmol/l is clinical ketosis.

² NEFA = Non esterified fatty acid.

³ Milk urea concentration is influenced by: Protein intake (both rumen degradable and undegradable), Energy intake (especially rumen available energy needed to capture rumen available N), Heat damage (resulting in reduced protein and energy digestibility), Consumption of water (dehydration increases MUN), and Feed sorting.

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Body condition scores provide an indication of the energy status of dairy cattle. Essentially, body condition scoring provides an objective indication of the amount of fat cover on a dairy cow. This evaluation is accomplished by assigning a score to the amount of fat observed on several skeletal parts of the cow. Various point systems are used to score the animal. The most commonly used system ranges from 1.0 to 5.0.

One point of body condition equals 100 to 140 pounds gain in body weight. Body condition scoring can be an important tool to monitor sudden changes in body condition scores which can affect health. Hereby we show you some pictures with which you can easily score the body condition score of your cows. Therefore these guidelines should be adapted to local circumstances.



Score 1

Deep cavity around tailhead. Bones of pelvis and short ribs sharp and easily felt. No fatty tissue in pelvic or loin area. Deep depression in loin.



Score 2

Shallow cavity around tailhead with some fatty tissue lining it and covering spin bones. Pelvis easily felt. Ends of short ribs feel rounded and upper surfaces can be felt with slight pressure. Depression visible in loin area.



Score 3

No cavity around tailhead and fatty tissue easily felt over whole area. Pelvis can be felt with slight pressure. Thick layer of tissue covering top of short ribs which can still be left with pressure. Slight depression in loin area.



Score 4

Folds of fatty tissue are seen around tailhead with patches of fat covering pin bones. Pelvis can be felt with firm pressure. Short ribs can no longer be felt. No depression in loin area.



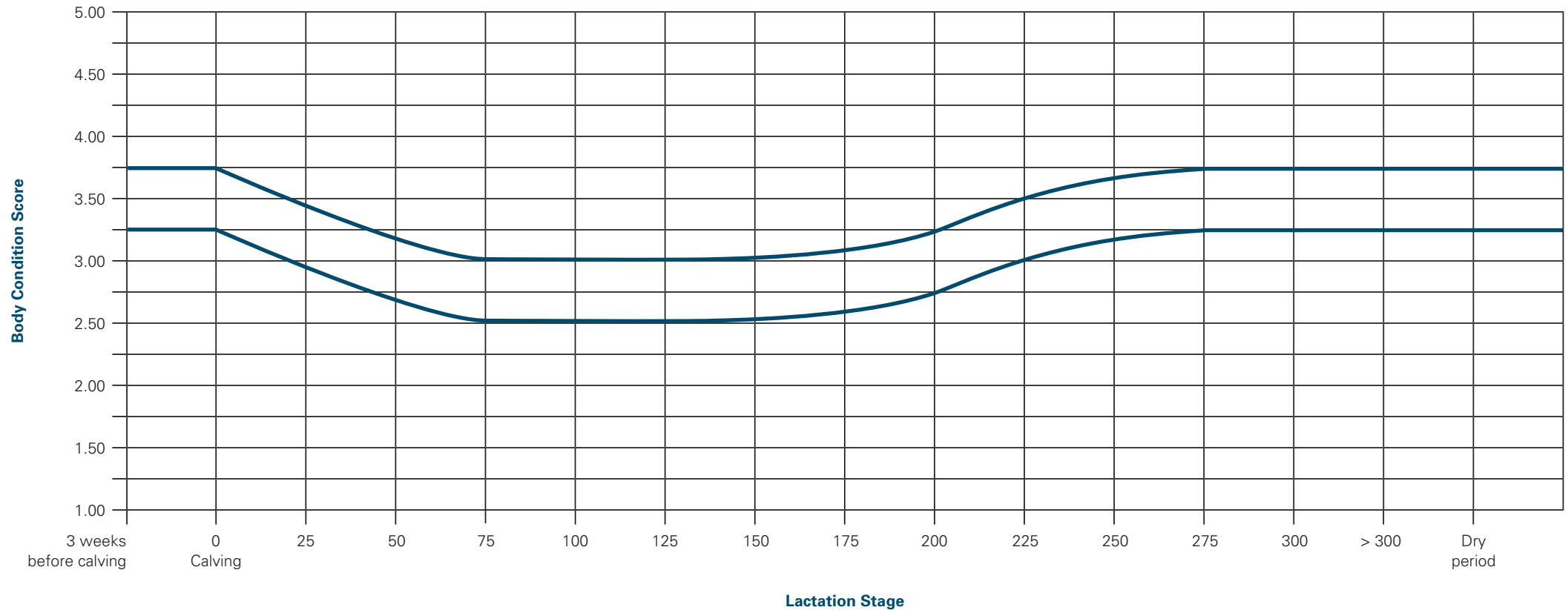
Score 5

Tailhead is buried in thick layer of fatty tissue. Pelvic bones cannot be felt even with firm pressure. Short ribs covered with thick layer of fatty tissue.

Body Condition Score

Date:

Name:



C1 — Feeding

Rumen fill is the result of dry matter intake, composition of the ration, digestion and passage speed through the rumen. To evaluate the rumen fill, you should position yourself behind and to the left at about a 45° angle (see position in photos). Look at the left side of the cow, specifically the slightly sunken rumen area.



Score 1

Left flank is deeply sunken. The skin over the transverse of the lumbar vertebrae sinks inward. The skin fold from the tuber coxae runs vertically down. The sunken rumen area behind the last rib measures more than one handwidth.



Score 2

The skin over the transverse of the lumbar vertebrae sinks inward. The skin fold from the tuber coxae curves forward to the rib. The rumen area behind the last rib measures a single handwidth.



Score 3

The skin over the transverse of the lumbar vertebrae first goes vertically down then curves outwards. The skin fold from the tuber coxae is no longer visible. The rumen area behind the last rib remains slightly sunken.



Score 4

The skin of the transverse of the lumbar vertebrae directly curves outwards. The rumen area behind the last rib is not sunken.



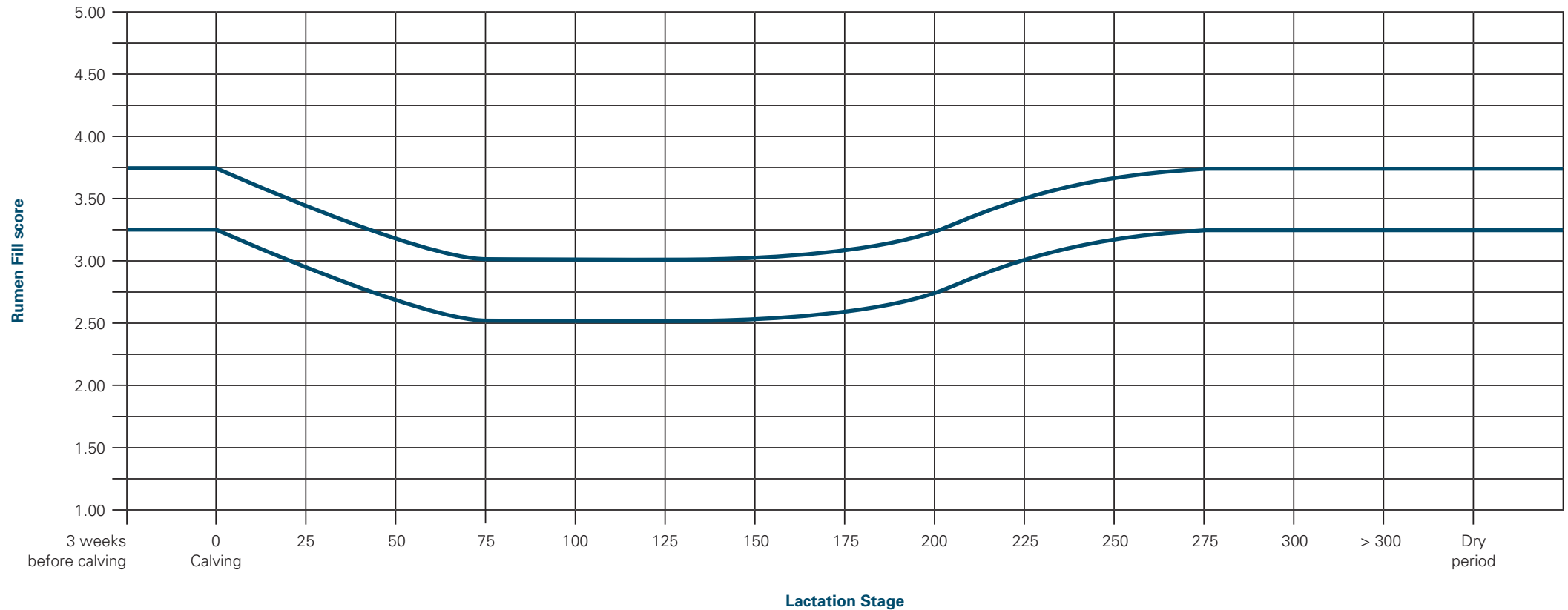
Score 5

The transverse of the lumbar vertebrae are no longer visible due to a well-filled rumen. The skin in the rumen area is taut. The transition from the ribs to the rumen area is no longer visible and the rumen area is not sunken.

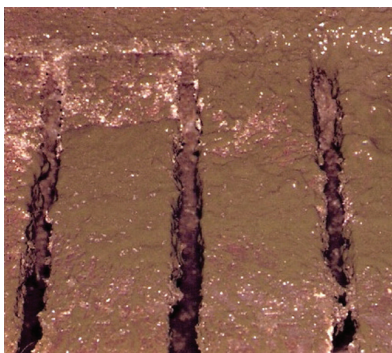
Rumen Fill score

Date:

Name:

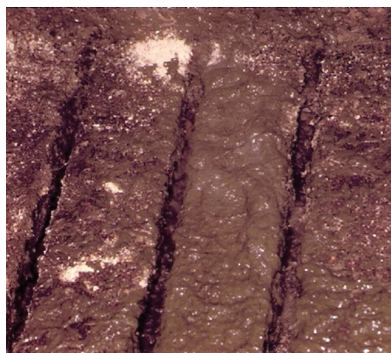


Manure consistency is influenced by the ratio of water to dry matter. To evaluate the manure consistency, it is important to start with fresh manure. Beyond the visual score, the evaluation also includes a «boot» test. A score of 3 or 4 represents the desired manure consistency.



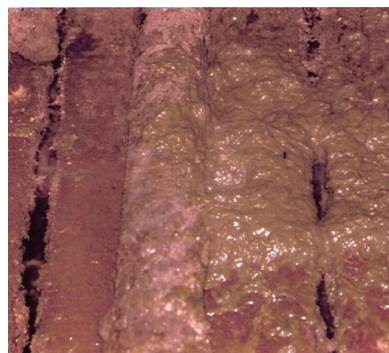
Score 1

The manure is watery and difficult to detect.



Score 2

The manure looks like thin custard. It splashes widely when it falls on hard ground.



Score 3

The manure looks like thick custard and coheres. It makes a “plopping” sound when it falls.

Boot test: When stepped on, the manure does not retain the imprint of the boot. When you lift your boot, absence of suction.



Score 4

The manure is thick with a heavy plopping sound when it falls. The manure is a true “pie” with several rings.

Boot test: When stepped on, the imprint of the boot is clearly visible. When you lift your boot, there is suction.



Score 5

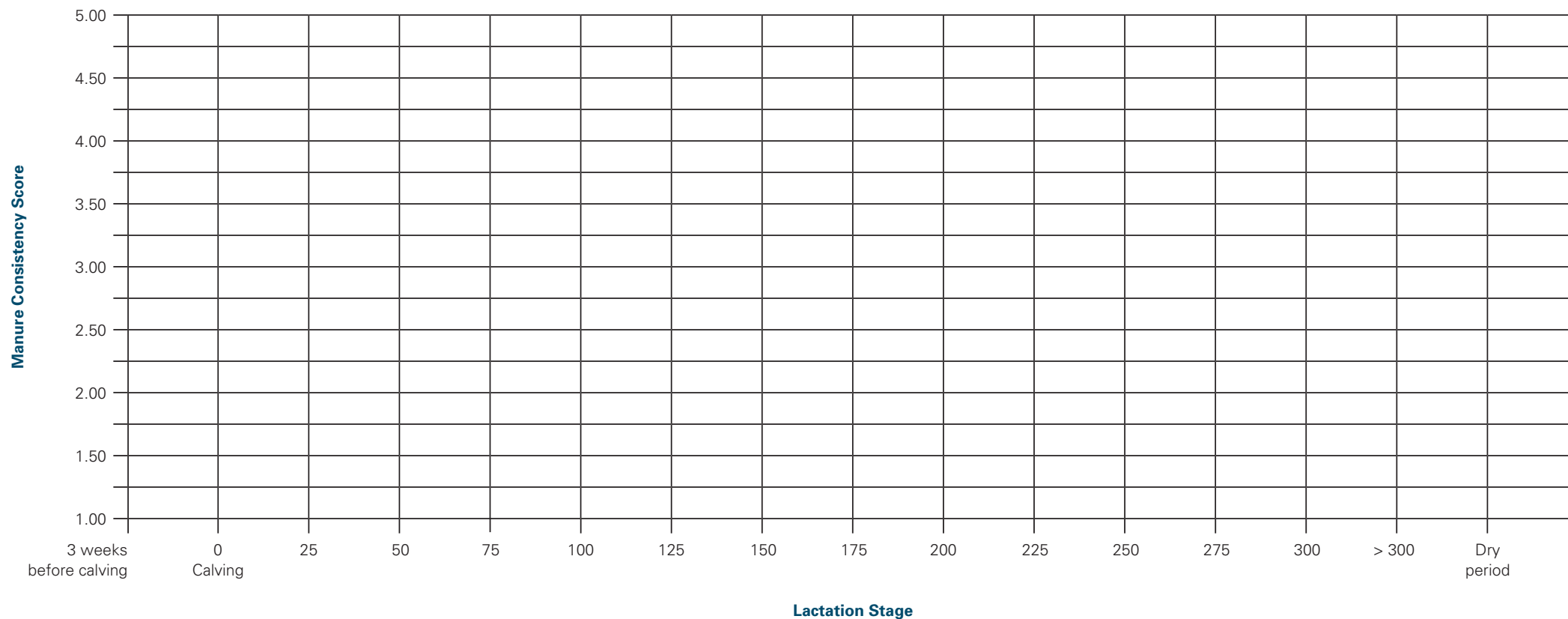
The manure is in firm balls (like horse manure).

Boot test: the imprint of the boot is clearly visible. Absence of suction.

Manure Consistency Score

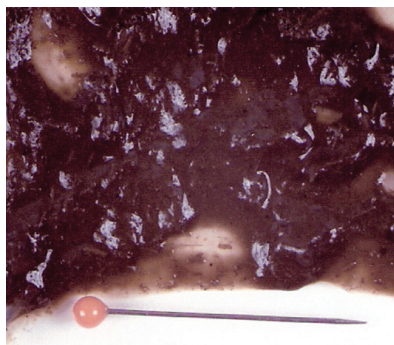
Date:

Name:



After scoring the manure consistency you should proceed to evaluate the feed digestion. The non-digested portion of the manure can be evaluated by scoring the manure consistency. To do so, take the manure in your hand, and slowly squeeze it. If the manure is homogeneous with a creamy consistency, then it

corresponds to Score 1. In this case, no undigested feed particles are present. When the manure score is 5, you will detect the presence of rough feed particles. These undigested feed particles are clearly visible.



Score 1

Manure feels like a creamy emulsion and is homogeneous. There are no observable undigested food particles.



Score 2

Manure feels like a creamy emulsion and is homogeneous. Some undigested food particles are present.



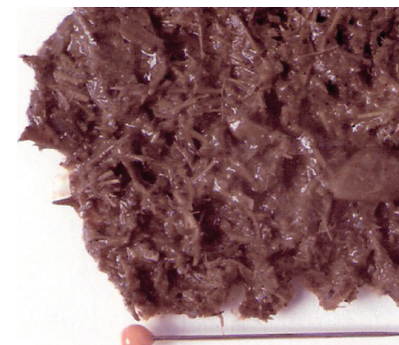
Score 3

Manure doesn't feel homogeneous to the touch. Undigested particles are visible. After squeezing and re-opening the hand the undigested fiber particles stick to fingers.



Score 4

Rough food particles are apparent in the manure. Undigested particles are clearly visible. After squeezing and re-opening the hand, a lump of undigested fiber particles remain in the palm.



Score 5

Rough food particles are felt in the manure. Undigested items from the ration are clearly recognizable.

Feed Digestion Score

Date:

Name:

