

DAIRY CALF AND HEIFER PROTOCOL

ANIMALS

Dairy calves and heifers are considered within 4 categories:

- Cat. 1: 0 to “Weaning”
- Cat. 2: “Weaning” to 6 months
- Cat. 3: 7 to 12 months
- Cat. 4: Upper 12 months

About the definition of “Weaning” distinctive between Cat.1 and 2

Calves belong to Cat.1 if they have been completely weaned or if they are older than 3 months.

In the case of weaned and non weaned animals (in accordance with the definition of weaning above) are in the same group, you take the decision if this group is representative of weaned or non weaned animals.

MEASURES

Measures for calves and heifers are based on measures well-developed and validated for Beef, Dairy and/or Veal Calves within Welfare Quality project.

PROTOCOL IN 6 STEPS

1. Avoiding Distance at the Feeding rank (ADF) for Cat. 2 to 4
2. 2 Qualitative Behaviour Assessment (QBA) (1 for Cat. 1 and 2; 1 for Cat. 3 and 4)
3. Behavioral observations (all 4 categories)
4. Clinical scores (all 4 categories)
5. Resources checklist
6. Management questionnaire

INFORMATIONS TO ASK BEFORE ARRIVAL ON THE FARM

→ **A short description:** you need to have an idea of the organization of the farm and not discover on the test-day that you will not be able to manage with the situation (example: 3 different buildings on 2 different areas)

- Approximately which is the number of calves and heifers in each 4 categories?
- How many different buildings and housing systems are in presence?

→ First Decisions rules

- Animal mixed within the main herd (example: pregnant heifers) are considered as cows and are not taken in account in this protocol, excepted for tie-stall systems.
- If there is more than one system within one category of animal, you will have to follow specific instructions for each parameters.

AT THE ARRIVAL ON THE FARM ON THE TEST-DAY

You will first draw a layout and give a number for each pen/segment. For segmentation, please refer you to Dairy protocol.

→ Second Decisions rules

- Will you be able to observe/perform all tests with all categories, in accordance with depth of buildings, luminance, design of the building...?
- Will you be able/will it be necessary to enter into pens?
- You could be confronted to very small groups: a group started with at least 3 animals... but if you have just two animals for one category (example of really small farms), you will consider these two animals as a group!
- Are these animals considered as weaned or non weaned? Please see comments in the paragraph on ANIMALS, p1.
- It could be important to respect a distributive line for all your measures, for example, start from the youngest to the oldest animal. You could also be confronted to technical problems (example 1: 2 buildings at a really far distance: you will do all the measures for a first building, and restart with the other building; example 2: ADF: you need to go and return between categories to be able to test all animals)

STEP 1/ADF

For details on the measure itself, please report you to ADF definition for Dairy.

→ Concern

You need to differentiate within pen and categories so do not forget to enter the number of the pen and the category.

You will test animals from Cat. 2 to 4 (3 different categories); non weaned animals are not tested.

You will test at least 50% of a pen but your goal will be to test as many animals as possible for each category.

→ Feasibility

You could be confronted to two main problems, due to

Routine management: Feeding of heifers could be done at several times between farms and in several times within the same farm! And also, it could be the first category or the last one to be feed first, etc. The test could be started and stopped, and started again. You will wait 5 min. after each new distribution of food.

Design: You could not be able to have 2 meters in front of the feeding rank (obstruction of the alley to not alley at all!). An angle of 45 degrees with the front of the animal, to obtain 2.5 meters could be chosen to approach the animal. If then a 2 m-distance is not possible, still do the assessment but write the maximum distance possible down on the recording sheet.

NB! STEP 2/QBA

For details on the measure itself, please report you to QBA definition for Dairy.

You will test animals from Cat. 1 to 4 (4 different categories) but you will divide these categories into 2 different QBA, a first one for the youngest animals (Cat. 1 and 2), a second one for the oldest (Cat. 3 and 4).

The duration of the test is 30 min in total, divided into 15 min per QBA.

For each QBA, the 15 min. are divided between housing systems in presence; you do not need to be representative of the population within categories. And finally, you could be able to take the same amount of time for a single animal in a specific system (example: a non weaned calf in a hutch outdoor) than for a group of animal in a pen.

The minimum amount of time is 2.5 min. per observation point, i.e. a maximum of 6 observation points per QBA. (For calculation, the duration of 1 observation point = 15 min. / number total of observations points)

You will provide a short description of each observation point, i.e. which category(ies); the number of animals; a description of the system (type of housing, individual or group, type of litter, type of feeding rank, visual/physical contacts permitted, etc.), the goal is to notice everything relevant to explain your feeling.

STEP 3/BEHAVIOURAL OBSERVATIONS

For the general way to perform observations, please report you to Dairy protocol. Here you will just find the details and specificities for calf and heifers.

- No herd scan will be performed.
- Lying down behaviours will be performed for 2 categories of heifers (Cat. 3 and 4)

- Other behaviours will be observed for all 4 categories
- A pen/segment scan is performed before and after each period
- You will observe four families of behaviours (Abnormal; Agonistic; Cohesive; Rare) and some Health parameters

→ General rules

The general rule is, that each category will be observed for 30 min each (2x15 min per category; 2 hours of net observations per farm).

If there is more than one housing system within one category, the different housing systems are only taken into account if a “considerable” proportion of animals is kept in one system.

Example 1: 1 group of 5 animals on deep litter, 2 groups of 18 animals on slatted floors - then only the slatted floor system will be observed.

Example 2: 1 group of 15 animals on deep litter and 2 groups of 4 and 14 animals respectively on slatted floors - then the deep litter group and the larger group on slatted floor will be observed.

If there are more than 2 systems within one category choose the housing systems that differ most from each other (i.e. deep bedded cubicles, cubicles without bedding, slatted floors - watch the deep bedded and the slatted floor groups).

If there are more than one pen within one category, select a different pen in the second hour.

In very large pens (i.e. more than 20 animals), where you need to observe 2 segments, the observation per segment is extended to 10 min (i.e. in total 20 min per pen).

Specificity Austria-Germany:

In Austria, if there are more housing systems within one category more observations will be carried out in these categories after the second hour of observations in order to increase the amount of observations per housing system. Of course, Witzenhausen people are “invited” to do so too, but this is voluntary.

In the case of small groups in adjacent pens, these can also be observed together (i.e. 2 pens with 4 or 5 animals). However, data have to be recorded separately for the two groups.

→ Observation method

For a small number of farms (i.e. 5 in each country?), both continuous and scan sampling will be applied. However, scan sampling will be done only for the behaviours “intersucking”, “substrate licking” and “tongue rolling”.

Scan interval is 2 min.

→ Definition of behaviours

Abnormal behaviours

Tongue playing/rolling: the animal is repeatedly twisting, twirling, swinging its tongue in a stereotypic way inside or outside the open mouth, or stretches out the tongue for longer than 5 seconds, sometimes with neck and head stretched somewhat upwards. A new bout is recorded if

the animal starts tongue rolling again after a pause of at least 10 seconds.

Object licking: the animal takes any equipment in its mouth and chews on it. A new bout is recorded if the animal starts chewing again after a pause of at least 10 seconds.

Sucking another animal: the actor gets hold of teat, udder, ear, tail, prepuce or skin fold of a group mate with its mouth and pulls at it with the muscles of its cheeks and tongue as if it wants to get milk out of it, for longer than 5 seconds.

Urine sucking: the animal drinks or licks the urine of an other animal (calf is sucking at the prepuce of another animal)

Agonistic and Cohesive behaviours

Please see Diary protocol

Rare behaviours

Play: the animal runs and/or comes with 2 or more legs of the ground (run/jump/frolic behavior)

Falling: An animal is accidentally losing balance and its body quickly moves towards the ground and touches it with udder, sternum, carpal joint, knee or with the whole side or abdomen.
If falling is caused by previous slipping then slipping is counted separately.

Mounting: A bull lifts itself up on its hind legs and jumps with its forelegs onto another group mate either from behind, the side or front. The receiver may be standing or lying.

STEP 4/CLINICAL SCORES

You will test all categories and as many animals as possible.

→ Body Condition Score (BCS)

For details on the measure itself, please report you to Beef protocol.

BCS will not be performed for Cat. 1.

You will detect only extremely severe loss of BSC (skinny animals).

→ Lameness

You will detect only severely lame without seen the animal walking.

A severe lameness for calves and heifers is characterized by:

A reluctance to bear weight on 1 limb and/or

A reluctance to walk

→ Cleanliness

Please report you to Beef protocol.

→ Integument

Please report you to Beef protocol.

An exception: swelling of the navel/umbilicus will not be taken into account for the examination of the integument (only hairless spots and lesions), but will be recorded in the clinical scoring

→ Health parameters

Coughing: Listen to cough, record coughing

Sneezing: Listen to sneeze, record sneezing

Nasal discharge: Observe nostrils, record severe (no transparent or abundant) mucus presence in nostrils

Increased respiratory rate: Observe flank of standing or lying down animals, record abnormal breathing i.e. increase of frequency (speed) and intensity (depth)

Ocular discharge: Observe eyes, record mucus traces (abundance of secretion or dry accumulation, no transparent)

Ear infection: Observe position of head and ear, record animals showing hanging ear or leaning head

Bloated rumen (Full calves): Observe flank, record calves with rounded belly either on the top, below or both

Diarrheas: Observe tail, record calves with accumulation of (wet and/or dry) manure around tail

Umbilicus infection: Observe belly, record severe swelling

STEP 5/RESOURCES CHECKLIST

Remember to mark what you notice and not what the producer used to do.

Data recording file provide you the opportunity to record several answers for a question if necessary.

STEP 6/MANAGEMENT QUESTIONNAIRE

It could take 1 hour and half – organize with the producer at your arrival the best moment for the interview.

Data recording file provide you the opportunity to record several answers for a question if necessary.