

## COW WELFARE ASSESSEMENT – FREE STALL SCORING (COMPILATION)

**Farm ID:** (province-DHI 5 digit e.g. ON10020)

**Type: TS or FS** (choose 1 answer)

**Date:** (dd-mm-yyyy)

**Observer:** (first name, last name)

*N.B.: Animal-based measures/in-barn checklist/management questionnaire refer to the group of high-production cows*

### SECTION 1 – ACCOMODATION AND HOUSING

#### 1.1. STALL DESIGN

##### A) LYING TIME

###### ANIMAL-BASED MEASURE

**TARGET: Comfortable dairy cows lie down for 12 h/d.**

###### FARM SCORE:

Herd average lying time = ..... h/d (calculated from accelerometers on 40 cows x 4 days)

Attribute a farm score according to if the measure meets or exceeds, almost meets or does not meet the target

Herd average total lying time, h/d	FARM SCORE
Meets or exceeds TARGET : $\geq 12$	2 (100 %)
Almost meets TARGET: $12 > x > 10$	1 (50 %)
Does not meet TARGET: $\leq 10$	0 (0%)

###### CHEKLIST: NO MEASURE

###### QUESTIONNAIRE: NO QUESTION

**B) HOCK, KNEE AND KNECK INJURIES****ANIMAL-BASED MEASURE**

**TARGET: Comfortable stalls minimize hock, knee and neck injuries.**

**FARM SCORE:**

Measure on each of the 40 focal cows the level of injuries for hock, neck and knee.

Attribute a farm score according to the % of cows without injuries for the 3 types of injuries

Level of injuries	0 (no injuries)	1(minor injuries)	2 (major injuries)	3 (major + injuries)	FARM SCORE
Hock	%	%	%	%	% of 0 injuries
Knee	%	%	%	%	% of 0 injuries
Neck	%	%	%	N/A	% of 0 injuries
				<b>FARM SCORE =</b>	<b>sum/3</b>

**CHECKLIST: NO MEASURE****QUESTIONNAIRE: NO QUESTION**

## C) STALL CONFIGURATION

ANIMAL-BASED MEASURE: NO MEASURE

### CHECKLIST

**TARGET 1: The average stalls meet recommendations for the “heaviest 10 %” cow for each of the 9 dimensions**

#### FARM SCORE target 1:

1) From the Excel sheet (XXXX), calculate: Herd heaviest 10 % cow = ..... kg

AND Select the nearest weight in the “TARGET” column in the following table

Calculate 5 % or 20 % of restriction (restriction direction from **Q105** in checklist) and fill the “5 % or 20 % RESTRICTION” column in the following table

2) From the **Q105** in the checklist, report the average measure of all stall measured in the “YOUR MEASURE” column for each of the 8 dimensions.

If your measure is NONE or YES for all samples then write “NONE” or “YES” and attribute maximal score.

Attribute a farm score for each of the 9 dimensions according to whether the measure meets or exceeds, almost meets (within 5 % or 20 %) or does not meet (more than 5 % or 20 % in the restrictive direction) the target.

*E.g. For stall width, 636 kg-range, 5 % of restriction means 116 cm (122-5 % = 122-6 cm)*

WEIGHT IN KG	TARGET					Calculate	YOUR MEASURE	FARM SCORE		
	455	545	636	727	818	5 % or 20 % restriction	AVERAGE	Meets or exceeds	Almost meets (within 5 %)	Does not meet (more than 5%)
Stall dimensions (cm)										
Stall width	112	117	122	127	137	Smaller		2	1	0
Stall length	244	244	274	305	305	Smaller		2	1	0
Bed length	163	168	173	178	183	smaller		2	1	0
Brisket board height	8	8	10	10	10	Higher		2	1	0
Height of upper edge of bottom divide rail above stall surface	28	28	30	30	30	Lower		2	1	0
Lunge space	> 76					n/a		2	1	0
Neck rail height	112	117	122	127	132	Smaller		2	1	0
Distance of neck rail from rear curb of stall	163	168	173	178	183	Smaller		2	1	0
Curb height	20	20	20	20	20	Higher		2	1	0
FARM SCORE target 1								/ 18*100		

**TARGET 2: 100 % of cows fitting in the average stall for bed length and width.**

Based on the measures of the 40 individual cows (length and width) – report results from Excel sheet (XXX) in the following table.

Attribute a farm score according to the % of cows fitting in the average stall for bed length and width

	Nb of cows fitting in the average stall	
Stall width		%
Bed length		%
<b>FARM SCORE target 2</b>	<b>% fit in width+% fit in length/2</b>	

**TARGET 3: The average multiparous Holstein Canadian cow fits in the average stall for bed length and width.**

Based on the measures of the 40 individual cows (length and width) – report results from Excel sheet (XXX) in the following table.

Attribute a farm score according to if the average multiparous Holstein Canadian cow fits in the average stall for bed length and width

	Does the average multiparous Holstein Canadian cow...	
Stall width	Fits:	1
	Does not fit:	0
Bed length	Fits:	1
	Does not fit:	0
<b>FARM SCORE target 2</b>	<b>Sum/2*100</b>	

**TOTAL SCORE TARGET 1 + 2+3 (equal weighting) = TOTAL SCORE TARGET 1 x 33 % + TOTAL SCORE TARGET 2 x 33 % ++ TOTAL SCORE TARGET 3 x 33 %**

**QUESTIONNAIRE: NO QUESTION**

## 1.2. SPACE ALLOWANCE

**ANIMAL-BASED MEASURE: NO MEASURE**

### CHECKLIST

#### A) STALLS

**TARGET: stocking density must not exceed 1.2 cow/stall to reduce competition.**

#### FARM SCORE:

Based on the **Q101** and **Q102** (checklist)

Attribute a farm score according to whether the measure exceeds, meets or does not meet the target

Density	FARM SCORE
Exceeds TARGET : density $\leq 1.0$	2 (100 %)
Meets TARGET: $1.0 < \text{density} \leq 1.2$	1 (50 %)
Does not meet TARGET: density $> 1.2$	0 (0%)

**B) FEEDERS**

**TARGET 1: linear feed bunk space must be at least 60 cm/cow to reduce competition.**

**FARM SCORE target 1:**

Based on the **Q108** and **Q109** (checklist)

Attribute a farm score according to whether the measure meets or exceeds, almost meets or does not meet the target

Linear feed bunk space	FARM SCORE target 1
Meets or exceeds TARGET 1 : linear feed bunk space $\geq$ 60 cm	2 (100 %)
Almost meets TARGET 1: 60 > linear feed bunk space $\geq$ 45 cm	1 (50 %)
Does not meet TARGET 1: linear feed bunk space < 45 cm	0 (0%)

**TARGET 2: limit competition at the feed bunk by the presence of a barrier at feed bunk.**

**FARM SCORE target 2:**

Based on the **Q110** (checklist)

Attribute a farm score according to whether the measure meets or does not meet the target

<b>Presence of a barrier at feeding bunk</b>	FARM SCORE target 2
Meets TARGET 2 : Headlocks or partitions between cows	1 (100 %)
Does not meet TARGET 2: No restriction to lateral movement	0 (0 %)

**TARGET 3: the alley where cows stand to feed should be at least 4.3 m to allow sufficient space for feeding and animal displacement.**

**FARM SCORE target 3:**

Based on the **Q111** (checklist)

Attribute a farm score according to whether the measure meets or exceeds, almost meets (within 5 %) or does not meet (more than 5 % below) the target

<b>Alley where cows stand to feed</b>	FARM SCORE target 3
Meets or exceeds TARGET 3: alley $\geq$ 4.3 m	2 (100 %)
Almost meets TARGET 3: 4.3 < alley $\leq$ 4.1	1 (50 %)
Does not meet TARGET 3: alley < 4.1	0 (0%)

**TARGET 4: height of feed barrier must be high enough to allow all cows to feed comfortably (no risk of neck injuries).**

**FARM SCORE target 4:**

Based on the **Q110** (checklist)

Based on the measures of the 40 individuals (height) – report results from Excel sheet (not enclosed) in the following table:

Attribute a farm score according to whether the measure meets, or does not meet the target

Height of feed barrier	FARM SCORE target 2
Meets TARGET 4 : > or = to 85 % of height of the 10 % highest cow	1 (100 %)
Does not meet TARGET 2: < to 85 % of height of the 10 % highest cow	0 (0 %)

**TOTAL SCORE TARGET 1 + 2 + 3 + 4 (equal weighting) = FARM SCORE TARGET 1 x 25 % + FARM SCORE TARGET 2 x 25 % + FARM SCORE TARGET 3 x 25 % + FARM SCORE TARGET 4 x 25 %**

**QUESTIONNAIRE: NO QUESTION**

### 1.3 STALL MANAGEMENT

ANIMAL-BASED MEASURE: NO MEASURE

## CHECKLIST

## A) STALL BASE

TYPE

## B) STALL BEDDING

TYPE

QUANTITY

QUALITY

TARGET: Provide deep-bedded dry stalls

## FARM SCORE:

Based on the questions Q112-113-114-115 in the checklist.

Attribute a score to the farm (choose the option that fits the best)\*:

\* Choose the main stall-base type. If 50/50, then choose the most comfortable.

Stall base: TYPE Q112	Bedding: QUANTITY Q113-1114	Bedding: QUALITY Q115		FARM SCORE
concrete	none	-	<i>Does not</i> meet requirement	0 (0%)
	little	wet/very wet	Meets requirements <i>BUT not</i> recommendations	1 (33 %)
		dry	Meets requirements <i>BUT not</i> recommendations	1 (33 %)
	deep	wet/very wet	Meets requirements <i>AND some</i> recommendations	2 (66 %)
		dry	Meets requirements <i>AND</i> recommendations	3 (100 %)
hard rubber mat/DIRT	none	-	<i>Does not</i> meet requirement	0 (0%)
	little	wet/very wet	Meets requirements <i>BUT not</i> recommendations	1 (33 %)
		dry	Meets requirements <i>BUT not</i> recommendations	1 (33 %)
	deep	wet/very wet	Meets requirements <i>AND some</i> recommendations	2 (66 %)
		dry	Meets requirements <i>AND</i> recommendations	3 (100 %)
Mattress/WATERBED	none	-	Meets requirements <i>BUT not</i> recommendations	1 (33 %)
	little	wet/very wet	Meets requirements <i>AND some</i> recommendations	2 (66 %)
		dry	Meets requirements <i>AND some</i> recommendations	2 (66 %)
	deep	wet/very wet	Meets requirements <i>AND some</i> recommendations	2 (66 %)
		dry	Meets requirements <i>AND</i> recommendations	3 (100 %)

QUESTIONNAIRE  
: NO QUESTION



## C) STALL/BEDDING MANAGEMENT

### ANIMAL-BASED MEASURE

**TARGET 1: Cows must be kept in an environment with a low level of contamination (1) – evaluation of cow cleanliness.**

N.B.: Cow cleanliness reflects the level of contamination of the environment. Udder and upper leg-flank cleanliness reflects cleanliness of bedding and stall. Lower leg cleanliness reflects cleanliness of walking areas.

#### FARM SCORE:

Measure on each of the 40 focal cows the level of cleanliness for upper leg-flank, udder and lower leg.

Attribute a farm score according to the % of cows with score 0-1 for all 3 body parts

Level of cleanliness	0 (clean)	1 (light contamination)	2 (heavy contamination)	3 (very heavy contamination)	FARM SCORE Target 1
Upper leg-flank	%	%	%	%	% of score 0-1
Udder	%	%	%	%	% of score 0-1
Lower leg	%	%	%	%	% of score 0-1
<b>FARM SCORE Target 1=</b>					<b>sum/3</b>

### CHECKLIST

**TARGET 2: Cows must be kept in an environment with a low level of contamination (2) – evaluation of stall cleanliness.**

#### FARM SCORE:

Based on the questions **Q116** in the checklist.

Stall cleanliness	FARM SCORE Target 2
Meets TARGET : all stalls scored A or B	2 (100 %)
Almost meets TARGET : all stalls scored A, B or C	1 (50 %)
Does not meet TARGET : some stalls scored D or E	0 (0%)

### QUESTIONNAIRE

**TARGET 3: Stalls must be cleaned at every milking.**

#### FARM SCORE:

Based on the questions **Q2** in the questionnaire.

Stall raked out and patties removal	FARM SCORE Target 3
Meets TARGET and recommendations : A	2 (100 %)
Meets TARGET : B	1 (50 %)
Does not meet TARGET : C or D	0 (0%)

**TARGET 4: Stalls must be routinely bedded.****FARM SCORE:**

Based on the questions **Q3** in the questionnaire.

Adding new bedding	FARM SCORE Target 4
Meets TARGET: A or B	2 (100 %)
Almost meets TARGET : C	1 (50 %)
Does not meet TARGET : D	0 (0%)

**TOTAL SCORE TARGET 1 + 2 + 3 + 4 (equal weighting) = FARM SCORE TARGET 1 x 25 % + FARM SCORE TARGET 2 x 25 % + FARM SCORE TARGET 3 x 25 % + FARM SCORE TARGET 4 x 25 %**

## 1.4. PEN MANAGEMENT (STANDING AREAS)

ANIMAL-BASED MEASURE: NO MEASURE

### CHECKLIST

**TARGET 1: Minimize the time cows spend standing on concrete in the pen** (we will check only in front of the feed bunk)

#### FARM SCORE:

Based on the questions **Q117** in the checklist.

Type of flooring in standing areas	Q117 <sup>1</sup>	FARM SCORE target 1
Meets TARGET 1:	E, F, G or H	1 (100 %)
Does not meet TARGET 1:	A, B, C or D	0 (0 %)

<sup>1</sup>if answer I. (other, e.g. sawdust, mattress), please judge if it is softer than concrete (assign 1) or not (assign 0).

**TARGET 2: Provide slip-resistant flooring in standing areas of the pen** (Cf. SOP Slipperiness of flooring in standing area))

#### FARM SCORE:

Based on the questions **Q118** in the checklist.

Slipperiness of flooring in standing areas	Q118	FARM SCORE target 2
Meets TARGET 2:	A	1 (100 %)
Does not meet TARGET 2 :	B	0 (0 %)

**TARGET 3: Ensure the floor is cleaned in standing areas of the pen** (we will check only in front of the feed bunk)

#### FARM SCORE:

Based on the questions **Q119** in the checklist, only on sample #1 (before scraping)

Cleanliness of flooring in standing areas	Q119	FARM SCORE target 3
Meets TARGET 3:	A or B	2 (100 %)
Almost meets TARGET 3:	C	1 (50 %)
Does not meet TARGET 3:	D	0 (0%)

**QUESTIONNAIRE**

**TARGET 4: Flush and/or scrape 2-3 times per day in standing areas of the pen**

**FARM SCORE:**

Based on the questions **Q5** in the questionnaire.

Cleaning standing areas Q5	Q5- other standing areas	FARM Target 4
Meets TARGET:	A	2 (100 %)
Almost meets TARGET :	B	1 (50 %)
Does not meet TARGET :	C	0 (0%)

**TOTAL SCORE TARGET 1 + 2 + 3 + 4 (equal weighting) = FARM SCORE TARGET 1 x 25 % + FARM SCORE TARGET 2 x 25 % + FARM SCORE TARGET 3 x 25 % + FARM SCORE TARGET 4 x 25 %**

## 1.5. MILKING PARLOR, HOLDING PENS AND TRANSFER ALLEYS TO THE MILKING PARLOR

ANIMAL-BASED MEASURE: NO MEASURE

CHECKLIST + QUESTIONNAIRE

**TARGET 1: Minimize milking and holding time below 2 h per day**

**FARM SCORE:**

Based on the questions **Q122-123** in the checklist and **Q6** in questionnaire:

Estimate the time between when the first cow of the group is taken out of the home pen for milking and the last cow of the group is back in the home pen: Q123 – Q122 = ..... - ..... = ..... hh:mm

Multiply this holding/milking time per number of milking per day **Q6**: ..... x ..... = ..... hh:mm

Milking and holding time	FARM SCORE target 1
Meets TARGET 1: < 2 h per day	2 (100 %)
Almost meets TARGET 1: 2-3 h per day	1 (50 %)
Does not meet TARGET 1: > 3 h per day	0 (0%)

**TARGET 2: Minimize the time cows spend in concrete in the milking parlor, holding area and alleys to the milking parlor**

**FARM SCORE:**

Based on the questions **Q124, 125 and 126** in the checklist.

Type of flooring in milking parlor	Q124 <sup>1</sup>	FARM SCORE Q124
Meets TARGET 2:	E, F, G or H	1 (100 %)
Does not meet TARGET 2:	A, B, C or D	0 (0 %)

<sup>1</sup>if answer I. (other, e.g. sawdust, mattress), please judge if it is softer than concrete (assign 1) or not (assign 0).

Type of flooring in holding area	Q125 <sup>1</sup>	FARM SCORE Q125
Meets TARGET 2:	E, F, G or H	1 (100 %)
Does not meet TARGET 2:	A, B, C or D	0 (0 %)

<sup>1</sup>if answer I. (other, e.g. sawdust, mattress), please judge if it is softer than concrete (assign 1) or not (assign 0).

Type of flooring in alleys to the milking parlor	Q126 <sup>1</sup>	FARM SCORE Q126
Meets TARGET 2:	E, F, G or H	1 (100 %)
Does not meet TARGET 2:	A, B, C or D	0 (0 %)

<sup>1</sup>if answer I. (other, e.g. sawdust, mattress), please judge if it is softer than concrete (assign 1) or not (assign 0).

Type of flooring Q124 + Q125 + Q126	FARM SCORE target 2	= FARM SCORE Q124 + Q125 + Q126 /3

**TARGET 3: Provide slip-resistant flooring in the alleys exiting the milking parlor (NOT DONE ANYMORE)**

**FARM SCORE:**

Based on the questions **Q127** in the checklist.

Slipperiness of flooring in standing areas	Q127	FARM SCORE target 3
Meets TARGET 3:	A or B	1 (100 %)
Does not meet TARGET 2 :	C or D	0 (0 %)

**QUESTIONNAIRE**

**TARGET 4: Flush and/or scrape 2-3 times per day in alleys to the milking parlor**

**FARM SCORE:**

Based on the questions **Q7** in the questionnaire.

Cleaning in alleys to the milking parlor	Q7	FARM SCORE target 4
Meets TARGET:	A and $\geq$ 2-3 times/d or B	2 (100 %)
Almost meets TARGET :	A and $\geq$ 1 time/d or C	1 (50 %)
Does not meet TARGET :	A and $<$ 1 time/d D	0 (0%)

**TOTAL SCORE TARGET 1 + 2 + 3 + 4 (equal weighting) = FARM SCORE TARGET 1 x 25 % + FARM SCORE TARGET 2 x 25 % + FARM SCORE TARGET 3 x 25 % (NOT DONE ANYMORE) + FARM SCORE TARGET 4 x 25 %**

## SECTION 2 – FEED AND WATER

### 2.1 BODY CONDITION SCORING

#### ANIMAL-BASED MEASURE

**TARGET:** no cows should be at a BCS of 2 or lower

#### FARM SCORE:

Measure BCS on each of the 40 focal cows.

Attribute a farm score according to the number of cows with BCS  $\leq$  2.

Milking and holding time	FARM SCORE
Meets TARGET : 0/40 cows with BCS $\leq$ 2	2 (100 %)
Almost meets TARGET : 2/40 cows with BCS $\leq$ 2 (within 5 %)	1 (50 %)
Does not meet TARGET : More than 2/40 cows with BCS $\leq$ 2 (below 5 %)	0 (0%)

#### CHEKLIST: NO MEASURE

#### QUESTIONNAIRE: NO QUESTION

## 2.2. NUTRITION AND FEED MANAGEMENT

### ANIMAL-BASED MEASURE

#### QUESTIONNAIRE+ CHECKLIST

#### TARGET 1: Provide feed to the cow daily

##### FARM SCORE:

Based on the questions **Q9** in the questionnaire.

Fresh feed	Q9	FARM SCORE target 1
Exceeds TARGET 1:	A	2 (100 %)
Meets TARGET 1:	B	1 (50 %)
Does not meet TARGET 1:	C	0 (0%)

#### TARGET 2: Keep a consistent feeding schedule

##### FARM SCORE:

Based on the questions **Q10 (TMR) or Q12 (no TMR)** in the questionnaire.

Fresh feed	Q10	Q12	FARM SCORE target 2
Meets TARGET 2: consistent schedule	A, B or C	Producer provided a schedule	1 (100 %)
Does not meet TARGET 2 : inconsistent schedule	D	Producer did not provide a schedule	0 (0 %)

#### TARGET 3: Ensure continuous access to feed

##### FARM SCORE:

Based on the questions **Q11 (TMR) or Q12 (no TMR)** in the questionnaire and **Q128** in checklist.

Push-up routine	Q11	Q12	FARM SCORE Q12
Meets TARGET 3:	A	2 forages or more	2 (100 %)
Almost meet TARGET 3:	B	1 forage + 1 concentrate delivered at 2 different time	1 (50 %)
Does not meet TARGET 3 :	C or D	1 forage + 1 concentrate deliver at the same time	0 (0%)

Estimate continuous feed access	Q128	FARM SCORE Q128
Meets TARGET 3:	4 x A	2 (100 %)
Almost meet TARGET 3:	3 x A	1 (50 %)
Does not meet TARGET 3 :	2 x A and less	0 (0%)

Continuous feed access Q11/12 + Q128	FARM SCORE target 3	= FARM SCORE Q11/Q12 + Q128/2
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## SECTION 3 – HEALTH AND WELFARE MANAGEMENT

### 3.1 LAMENESS

#### ANIMAL-BASED MEASURE

**TARGET 1: Less than 10 % of obvious or severe lame cows**

#### FARM SCORE:

Measure gait score on each of the 40 focal cows.

Attribute a farm score according to the number of cows with gait score for obviously/severely lame.

Prevalence lameness	FARM SCORE target 1
Exceeds TARGET 1: $\leq$ 5 % obviously/severely lame 2/40 cows or less	3 (100 %)
Meets TARGET 1 : 6-10 % obviously/severely lame 3/40 cows	2 (66 %)
Almost meets TARGET 1: 11-15 % obviously/severely lame 4-6/40 cows	1 (33 %)
Does not meet TARGET 1: $>$ 15 % obviously/severely lame More than 6/40 cows	0 (0 %)

#### QUESTIONNAIRE

**TARGET 2: Routinely observe cows for lameness**

#### FARM SCORE:

Based on the questions **Q25** in the questionnaire.

Observe for lame cows	Q25	FARM SCORE target 2
Meets TARGET 2	B or C	2 (100 %)
Almost meet TARGET 2:	D	1 (50 %)
Does not meet TARGET 2	A or E	0 (0%)

**TARGET 3: Proper procedure to treat lame cows**

#### FARM SCORE:

Based on the questions **Q29** in the questionnaire.

Treat lame cows	Q29	FARM SCORE target 3
Meets TARGET 3	A or B	2 (100 %)
Almost meet TARGET 3	C	1 (50 %)
Does not meet TARGET 3	D or E	0 (0%)

**TARGET 4: Keep complete record of lameness****FARM SCORE:**

Based on the questions **Q28** in the questionnaire.

Record lameness	Q28	FARM SCORE target 4
Meets TARGET 4	A, B or C	2 (100 %)
Almost meet TARGET 4	D	1 (50 %)
Does not meet TARGET 4	E	0 (0%)

**TOTAL SCORE TARGET 1 + 2 + 3 + 4 (equal weighting) = FARM SCORE TARGET 1 x 25 % + FARM SCORE TARGET 2 x 25 % + FARM SCORE TARGET 3 x 25 % + FARM SCORE TARGET 4 x 25 %**

**3.2 CLAW HEALTH/HOOF-TRIMMING****ANIMAL-BASED MEASURE****QUESTIONNAIRE**

**TARGET 1: Trim claw approximately two months before calving to prevent and minimize lameness after calving**

**FARM SCORE:**

Based on the questions **Q35** in the questionnaire.

Hoof-trimming procedure	Q35	FARM SCORE target 1
Meets TARGET 1	B or C	2 (100 %)
Almost meet TARGET 1	A	1 (50 %)
Does not meet TARGET 1	D or E	0 (0%)

**TARGET 2: Keep complete record of hoof-trimming**

**FARM SCORE:**

Based on the questions **Q39** in the questionnaire.

Record hoof-trimming	Q39	FARM SCORE target 2
Meets TARGET 1	A	1 (100 %)
Does not meet TARGET 1	B	0 (0 %)

**TOTAL SCORE TARGET 1 + 2 (equal weighting) = FARM SCORE TARGET 1 x 50 % + FARM SCORE TARGET 2 x 50 %**

*SECTION 4 – CALVING (No target)*

*SECTION 5 – CODE OF PRACTICES (No target)*