

## COW WELFARE ASSESSMENT – IN-BARN CHECKLIST – TIE STALL

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

**Type: TS or FS** (choose 1 answer) → If TS, go to Q106

**Pen #: 1 or 2** (choose 1 answer: when more than 1 pen, do check-list for a maximum of 2 pens representing the majority of focal cows)

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

**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 (No measure)

B) HOCK, KNEE AND KNECK INJURIES (No measure)

#### C) STALL CONFIGURATION Q100 – Q105 FS only.

**106 – TS only.** Draw a layout of the barn where your 40 focal cows are housed (e.g. as shown in Q107, with feed alleys, concrete walls, etc.):

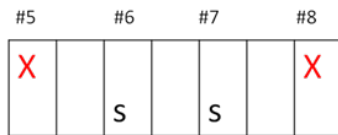
- (a) Count the total number of cows in the barn: ..... cows  
 (b) Count the total number of usable stalls: ..... usable stalls

**Q107 – TS only.** In every row of stalls, measure the first and the last usable stall for **bed length, height of manger wall, tie-rail height** and **tie-rail forward position** (**X** in the following diagram) and identify an additional 2 stalls located in the middle of each row (find the middle stall and identify the stalls on either side of the middle stall, **s** in the following diagram) – as indicated on the diagram. These **s**-stalls will be used for additional measures.

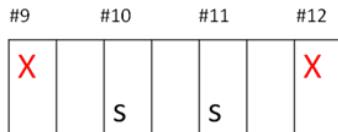
stall-samples



Row #: which stall is the shortest (#1 or #4)?



Row #: which stall is the shortest (#5 or #8)?



Row #: which stall is the shortest (#9 or #12)?

Mark chosen stalls with masking-tape and attribute #.

Attribute # to each row and identify which stall is the shortest one (first or last of the row?). For each of your 40 focal animals, you will report row # and rank in the row (from shortest stall) in animal-based recording sheet.

Fill the following table. Report stall dimensions in cm.

Letters following each dimension is a symbol in Fig. 2 (bottom of the page)

Stall dimensions (cm)	#1	#4	#5	#8	#9	#12
Bed length (B) <sup>2</sup>						
Height of manger wall <sup>3</sup>						
Tie-rail height (E) <sup>5</sup>						
Tie-rail forward position (F) <sup>6</sup>						

<sup>1</sup> stall width = center-to-center stall divider placement

<sup>2</sup> bed length = distance from rear curb to manger wall

<sup>3</sup> height of manger wall = height of manger wall to stall surface (bedding surface)

<sup>5</sup> tie rail height = height below tie rail to stall surface (bedding surface); if no tie rail indicate NONE

<sup>6</sup> horizontal distance between rear edge of tie rail and rear point of stall curb if no tie rail indicate NONE

If more than 3 rows per barn, you'll need to measure more stalls:

Stall dimensions (cm)						
Bed length (B) <sup>2</sup>						
Height of manger wall <sup>3</sup>						
Tie-rail height (E) <sup>5</sup>						
Tie-rail forward position (F) <sup>6</sup>						

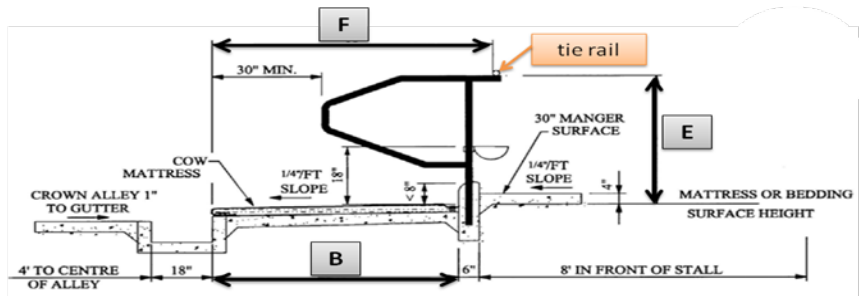


Fig. 2: Tie-stall configuration (type: tie-rail style), the letters symbolize the dimensions equivalent to the dimensions of a free-stall (Fig. 1), B: Distance from rear curb to bricket board, E: Height below tie-rail, F: Horizontal distance between rear edge of tie-rail and rear point of the curb for bedding stalls (adapted from OMAFRA, 2008)

## 1.2. SPACE ALLOWANCE

A) STALLS(No measure)

B) FEEDERS Q108-Q111 –FS only.

## 1.3 STALL MANAGEMENT

A) STALL BASE

TYPE

Q112. What is the stall base-type (surface under bedding)? (Select one or more answer and count the nb of stalls):

	Nb of stalls	Total nb of stall	% of stalls
A. Concrete			
B. Rubber mat			
C. Geotextile mattress			
D. Sand (deep-bedded)			
E. Waterbed			
F. Dirt (composted/dried manure)			
G. Other Specify: .....			

**B) STALL BEDDING****TYPE**

**Q113.** What is the stall bedding-type? (Select one or more answer and count the nb of stalls)\*:

\* If flooring = dirt (answer F to question **Q112**) and bedding = composted or dried manure (answer E, F) then choose **I. None**

	Nb of stalls	Total nb of stall	% of stalls
A. Straw			
B. Sawdust			
C. Woodshaving			
D. Composted manure			
E. Dried manure			
F. Shredded newspaper			
G. Sand			
H. Other Specify: .....			
I. None			

**QUANTITY**

**Q114.** Estimate bedding quantity by measuring at 2 spots near the back of the stall after raking the bedding flat.

Use the same stall-samples as **Q105 FS/Q107 TS** as following (min. 6/farm, if only 2 rows, add middle stalls of each row):

If unable to rake the bedding (you are unable to measure because it is so little), then write **NONE** (and change for I. in **Q113**)

If organic bedding material or superficial quantity of sand (answers A, B, C, E, F, G, and H for **Q113**):

- A. Little:  $\leq 2$  cm (equivalent to 1 kg straw = 1 kg of sawdust = 1 kg of woodshaving)
- B. Deep:  $> 2$  cm

If deep-bedded sand (answer D for **Q112**):

- A. Little:  $> 0$  cm below curb height
- B. Deep: = 0 cm below curb height

Place answers (NONE, A or B) in the following table (Choose 1 answer for each #):

	#2	#3	#6	#7	#10	#11		
Bedding quantity								

**QUALITY (DRYNESS)**

**Q115.** Estimate bedding dryness by using "Stall bedding wetness SOP". Use the same stall-samples as

**Q105 FS/Q107 TS** (min. 6/farm, if only 2 rows, add middle stalls of each row):

- A. Dry
- B. Wet
- C. Very wet

Place answers (A, B or C) in the following table (Choose 1 answer for each #):

	#2	#3	#6	#7	#10	#11		
Bedding dryness								

**C) STALL MANAGEMENT**

**Q116.** How much manure is there in the stalls? Estimate for the same stall-samples as **Q105 FS/Q107 TS** (min. 6/farm, if only 2 rows, add middle stalls of each row). Place answers in the following table.

- A. None
- B. Little manure and / or visible wet areas
- C. Manure-free area larger than contaminated area
- D. Contaminated area larger than manure-free area
- E. Entire area contaminated

Place answers (A, B, C, D or E) in the following table (Choose 1 answer for each #):

	#2	#3	#6	#7	#10	#11		
Stall cleanliness								

**1.4. PEN MANAGEMENT (STANDING AREAS) Q117 – Q119 FS only.****1.5. MILKING PARLOR, HOLDING PENS AND TRANSFER ALLEYS TO THE MILKING PARLOR Q120 – Q127 FS only.****SECTION 2 – FEED AND WATER****2.1. BODY CONDITION SCORING (No measure)****2.2. NUTRITION AND FEED MANAGEMENT**

**Q128.** Check 4 times (at least 1 h in between checks) during your first visit if cows have access to feed (To estimate that cows had a continuous access at feed, with the exception of milking time)

- A. Yes – 90 % of cows have access at feed
- B. No – 90 % of cows do not have access at feed

Place answers (A or B) in the following table (Choose 1 answer for each #):

Time of the check (hh:mm)	Access at feed
#1	
#2	
#3	
#4	

## 2.3. WATER

**Q129.** Nb of water points in the pen (FS)/barn (TS): ..... water points

**Q130.** What type of waterers do cows have? (Choose 1 answer or more)

- A. stationary trough
- B. tip-over trough
- C. trough with balls/anti-frost
- D. bowl
- E. nipple drinker
- F. other Specify:.....

**Q131.** If troughs (answer A, B or C at **Q130**), measure the length of all waterers in the pens.

If waterer is a rectangular trough = length x 2

If waterer is a circular trough= diameter x 3.14

Waterer	Length (cm)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
total length of linear space (cm)	sum of all lengths =

**Q132 – TS only** \_ THIS QUESTION HAS BEEN REMOVED

## SECTION 3 – HEALTH AND WELFARE MANAGEMENT

3.1. MAJOR HERD HEALTH ISSUES (No measure)

3.2 LAMENESS IN YOUR DAIRY HERD (No measure)

3.3 LAMENESS MONITORING (No measure)

### 3.4. CLAW HEALTH/HOOF TRIMMING

#### A) FOOTBATH

**Q133.** What are the dimensions (cm) of the footbath (measure the ones that contain the solution)? (Insert measures in table below)

*If no use of footbath (answer B to Q30 in management questionnaire), do not fill*

	Length (cm)	Width (cm)	Depth (cm)
Footbath 1			
Footbath 2			
Footbath 3			
Footbath 4			

*B) HOOF-TRIMMING (no measure)*

## SECTION 4 - CALVING

### 4.1. CALVING AREA

**Q134.** What are the dimensions (cm) of the calving area? (Insert measures in table below)

*If regular free-stall or tie-stall (answer E or F to Q42 in management questionnaire), do not fill*

	Length (cm)	Width (cm)
Calving area 1		
Calving area 2		
Calving area 3		
Calving area 4		

**Q135.** What is the flooring-type (surface under bedding) of the calving area? (Insert answers in table below)

*If regular free-stall or tie-stall (answer E or F to Q42 in management questionnaire), do not fill*

- A. Concrete
- B. Rubber mat
- C. Geotextile mattress
- D. Sand
- E. Waterbed
- F. Dirt (composted/dried manure)
- G. Other Specify: .....

	Flooring-type
Calving area 1	
Calving area 2	
Calving area 3	
Calving area 4	

**Q136.** Is the calving area equipped with a waterer (functioning) and a feeder? (Insert answers in table below)

*If regular free-stall or tie-stall (answer E or F to Q42 in management questionnaire), do not fill*

- A. Yes
- B. No

	Waterer	Feeder
Calving area 1		
Calving area 2		
Calving area 3		
Calving area 4		

**Q137.** What is the cleanliness level\* in the calving area environment? (Cleanliness of walls, moisture, etc.) (Insert answers in table below). Cleanliness Score: A. Clean; B. Acceptable; C. Unacceptable.

\* Use visual chart to answer to the question

*If regular free-stall or tie-stall (answer E or F to Q42 in management questionnaire), do not fill*

	Cleanliness
Calving area 1	
Calving area 2	
Calving area 3	
Calving area 4	

4.2. CALVING MONITORING (No measure)

SECTION 5 – CODE OF PRACTICES (No measure)