

a useful guide to

# Linear Assessment

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# **SCORING PROCEDURE**

Stage of lactation and age of animal must be taken into consideration when assigning classification score and composite box breakdown. The classification benchmark standard is by comparison to the Society's 'Model Cow'.

- **Pointing System**

Excellent	90 – 100
Very Good	85 – 89
Good Plus	80 – 84
Good	79 – 75
Fair	74 – 65
Poor	64 and below

- **Maximum Points**

1 <sup>st</sup> Calver	89 points
2 <sup>nd</sup> Calver	90 points
3 <sup>rd</sup> Calver	93 points
4 <sup>th</sup> +	97 points

- **VG Heifer – 4 Box Breakdown**

90 point Maximum  
85 point Minimum Mammary, Feet & Legs  
83 point Minimum Dairy Strength & Rump  
143 cms Minimum Height

- **VG89 Heifers**

Must score a minimum of 89 points in every box

- **2<sup>nd</sup> Calver Excellent – 4 Box Breakdown**

All of the boxes must be 90 points  
Maximum score possible is 90 points for all four boxes

- **3<sup>rd</sup> Calver Excellent – No restriction on 4 Box Breakdown**

Final score 93 point Maximum

- **4<sup>th</sup> + Calver Excellent – No restriction on 4 Box Breakdown**

Maximum final score 97 points

- **Functional Trait Composite – 4 Box Breakdown**

The final class and score will be calculated from the subjective trait breakdown at the following ratio:

<b>Dairy Strength</b>	<b>25%</b>
<b>Rump</b>	<b>10%</b>
<b>Legs &amp; Feet</b>	<b>25%</b>
<b>Mammary</b>	<b>40%</b>

The hand-held data equipment will display a suggested final class and score, calculated from the functional trait composite breakdown. Classifiers may adjust the final score by one point.

The four functional trait composite areas are as follows:

### **Dairy Strength**

Dairy Strength Score consist of a Frame composite (weighting of 15%) and Dairy Character (weighting 10%) to give a total of 25%. Dairy Strength is not to be focused on size or stature, but 'Frame', strength through the front end and heart region of the animal, strength of constitution & front rib

### **Rump**

The introduction of this new descriptive composite, Rump, as a separate box aims to combat any issues with high pins, which have been identified as a potential problem in the breed. Rump will contribute 10% to the final class/TM. This will consist of Rump Angle (weighting of 8%) and Rump Width (weighting of 2%) to give a total of 10%

The Rump Score aims to focus on addressing the following areas:

- a. **Narrow Pins**
- b. **High Pins**
- c. **Inset Tail Head**
- d. **Advanced Anus**

**NO** animal with more than one problem or a severe single problem can achieve the highest grade.

### **Legs & Feet**

The shape and quality of the legs & feet, resulting in good locomotion. The classification to take into consideration environment and management factors.

### **Mammary**

The strength and quality of the fore and rear attachment, strength of central ligament and udder texture. The quantity of udder in relation to the size of animal, stage of lactation and time of inspection. Teat quality and position, with equal emphasis on teat position rear view and side view.

### **Final Score**

The final score will be suggested automatically from a calculation of the 4 box breakdown. The classifier must take into consideration the age and stage of lactation when assigning the final score.

# LINEAR INSPECTION

## Heifer Inspections

Full range of points must be used.

## 2<sup>nd</sup> and Later Lactations

For traits not physically measured, the linear code assigned must be relative to a mature female (Society Ideal Model).

All females receive a linear assessment recorded on a 1 – 9 code scale:

### Linear Traits

1	<b>Stature</b>	Measured at rump (withers for 2 <sup>nd</sup> and later lactations)
2	<b>Chest Width</b>	Width of chest between the top of the front legs
3	<b>Body Depth</b>	Depth of rear rib
4	<b>Angularity</b>	Openness of rib, depth of rear rib
5	<b>Rump Angle</b>	Hip to pins
6	<b>Rump Width</b>	Pin width
7	<b>Rear Legs Set</b>	Angle-side view
8	<b>Foot Angle</b>	Diagonal of foot angle – rear hoof
9	<b>Fore Udder Attachment</b>	Strength of attachment
10	<b>Rear Udder Height</b>	Distance from pins to milk secreting tissue
11	<b>Central Ligament</b>	Depth of ligament at base of udder
12	<b>Udder Depth</b>	The distance from the lowest part of the udder floor to the hock
13	<b>Front Teat Placement</b>	Position of the Front teats viewed from the rear
14	<b>Rear Teat Position</b>	Position of the Rear Teats
15	<b>Teat Position</b>	Side view
16	<b>Teat Length</b>	Length of the front teat
17	<b>Locomotion</b>	Movement of the animal
18	<b>Body Condition Score</b>	Research Trait

# Heifer Scoring – DIAGRAMMATICAL DESCRIPTIONS

## Standard Trait Definition

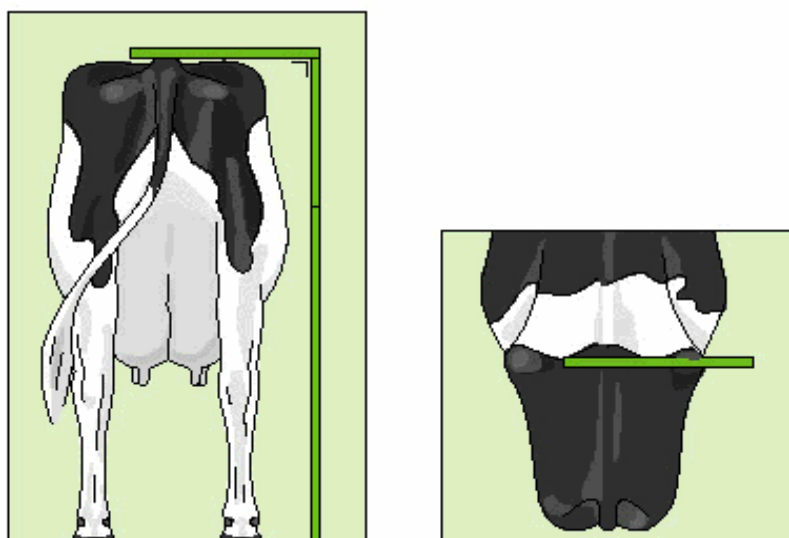
The precise description of each trait is well defined and it is essential that the full range of linear scores to identify the intermediate and extremes of each trait be used. The assessment parameters for the calculations should be based on the expected biological extremes of two year-old heifers. The scale must cover the biological extremes of the population in the Country of assessment.

## International WHFF Recommended Scale 1 - 9

### 1: Stature

**Ref. Point:** Measured from top of the spine in between hips to ground.  
Precise measurement in centimetres/inches, or linear scale:

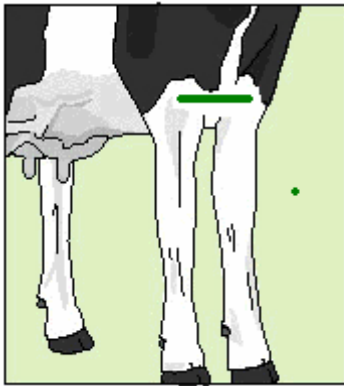
1 Short	130 cm
5 Intermediate	
9 Tall	154 cm



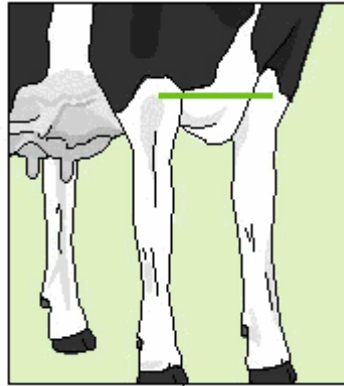
## 2: Chest Width

**Ref. Point:** Measured from the inside surface between the top of the front legs:

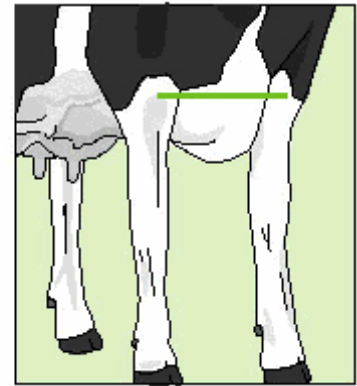
- 1 – 3 Narrow
- 4 – 6 Intermediate
- 7 – 9 Wide



1  
Narrow



5

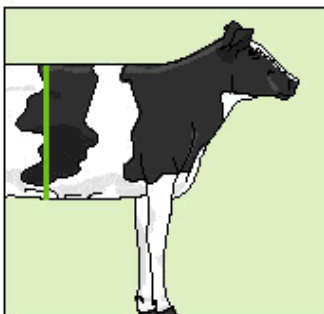


9  
Wide

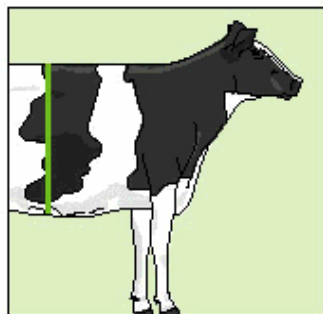
## 3: Body Depth

**Ref. Point:** Distance between top of spine and bottom of barrel at last rib – the deepest point:

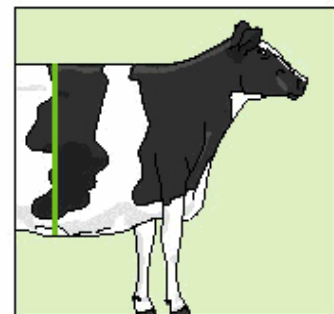
- 1 – 3 Shallow
- 4 – 6 Intermediate
- 7 – 9 Deep



1  
Shallow



5

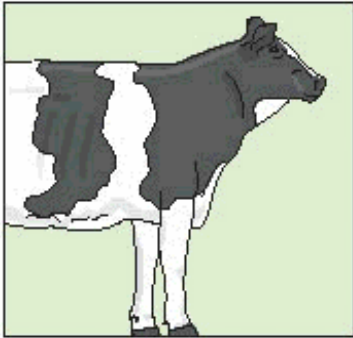


9  
Deep

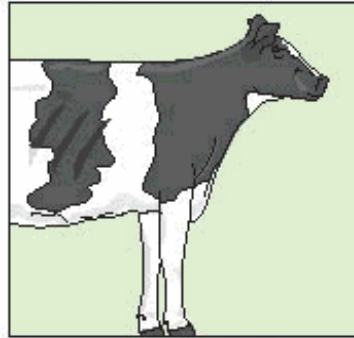
#### 4: Angularity

**Ref. Point:** The angle and openness of the ribs:

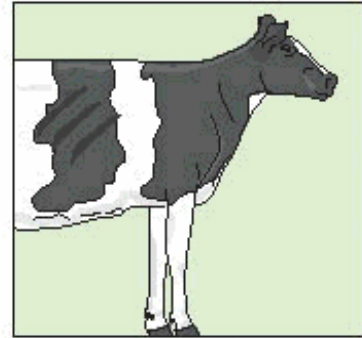
- 1 – 3 Coarse
- 4 – 6 Intermediate
- 7 – 9 Open



**1**  
**Coarse**



**5**

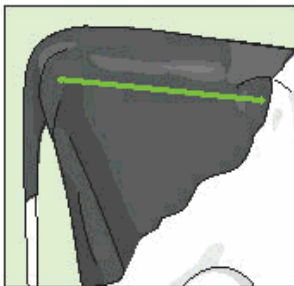


**9**  
**Open**

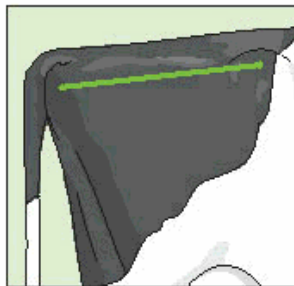
#### 5: Rump Angle

**Ref. Point:** Measured as the angle from the top of the hip to the top of the pin bone:

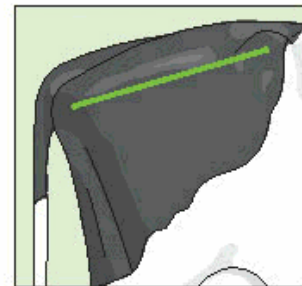
- 1 High Pins
- 2 " "
- 3 Level
- 4 Slight slope
- 5 Intermediate
- 7
- 9 Extreme slope



**1**  
**High Pins**



**5**



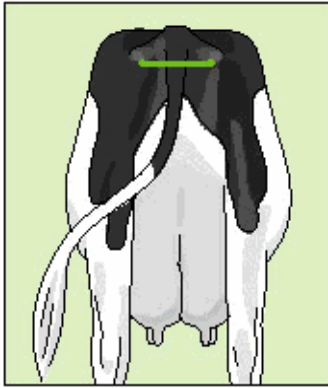
**9**  
**Sloped**



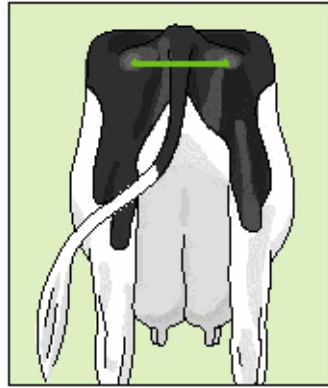
## 6: Rump Width

**Ref. Point:** Distance between the most posterior point of pin bones:

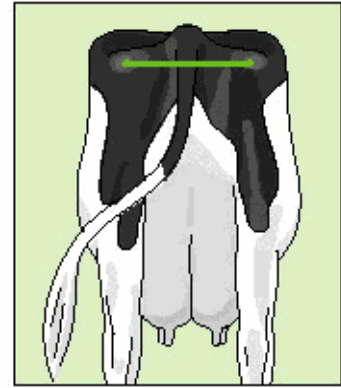
- 1 – 3 Narrow
- 4 – 6 Intermediate
- 7 – 9 Wide



1  
Narrow



5

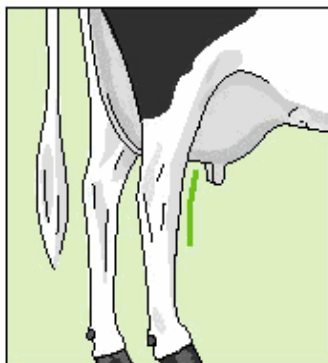


9  
Wide

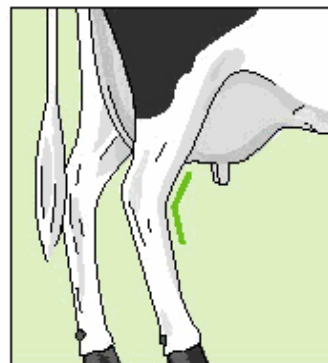
## 7: Rear Legs Side View

**Ref. Point:** Angle measured at the front of the hock:

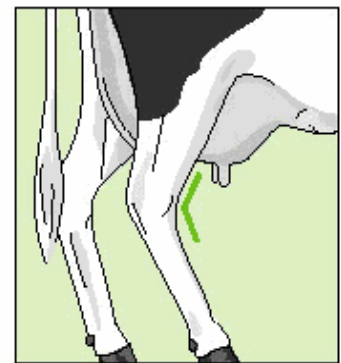
- 1 – 3 Straight
- 4 – 6 Intermediate
- 7 – 9 Sickled



1  
Straight



5

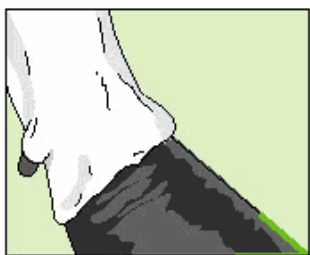


9  
Sickled

## 8: Foot Angle

**Ref. Point:** Angle at the front of the rear hoof measured from the floor to the hairline:

- 1 – 3 Very low angle
- 4 – 6 Intermediate angle 45 degrees.
- 7 – 9 Very steep



**1**  
**Low**



**5**

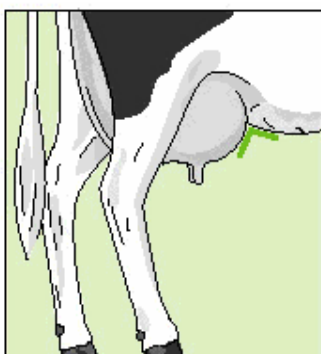


**9**  
**Steep**

## 9: Fore Udder Attachment

**Ref. Point:** The strength of attachment of the fore udder to the abdominal wall:  
Not a true linear trait - Optical

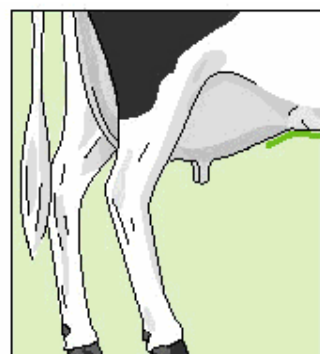
- 1 – 3 Weak and loose
- 4 – 6 Intermediate acceptable
- 7 – 9 Extremely strong and tight.



**1**  
**Loose**



**5**

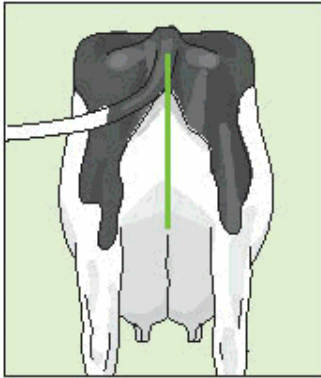


**9**  
**Strong**

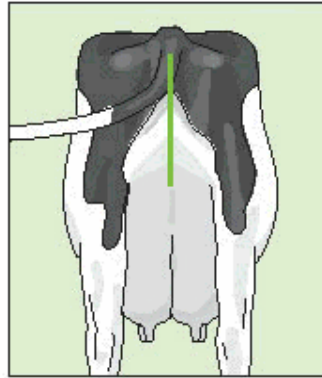
## 10: Rear Udder Height

**Ref. Point:** The distance between vulva (pin bone) and the milk secreting tissue:  
in relation to height of the animal:

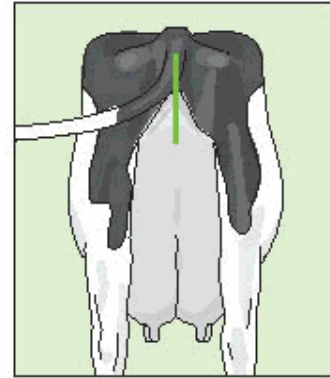
- 1 – 3 Very low
- 4 – 6 Intermediate
- 7 – 9 High



**1**  
**Low**



**5**

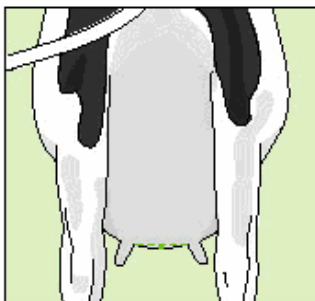


**9**  
**High**

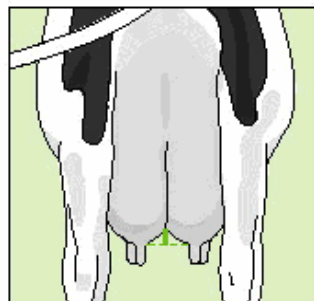
## 11: Central Ligament

**Ref. Point:** The depth of cleft, measured at the base of the rear udder:

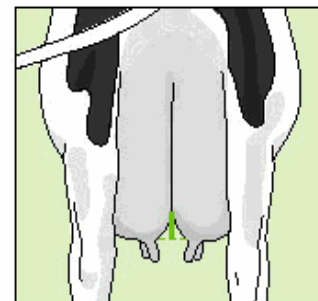
- 1 – 3 Convex to flat floor (flat)
- 4 – 6 Slight definition
- 7 – 9 Deep/strong definition



**1**  
**Broken**



**5**

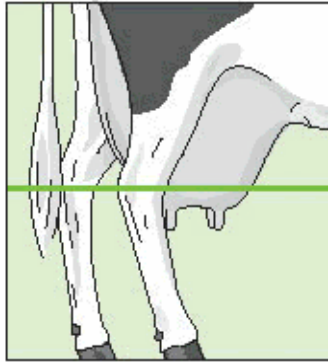


**9**  
**Strong**

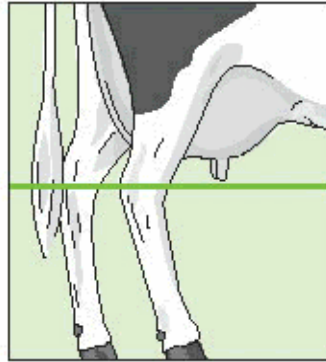
## 12: Udder Depth

**Ref. Point:** The distance from the lowest part of the udder floor to the hock:

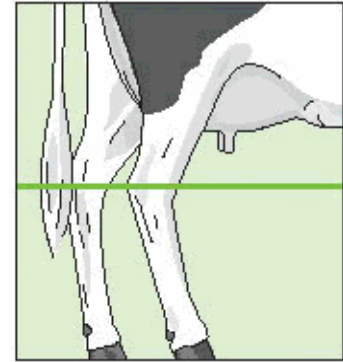
- 1 Below hock
- 2 Level with hock
- 5 Intermediate
- 9 Shallow (22cms Above Hocks)



**1**  
**Deep**



**5**

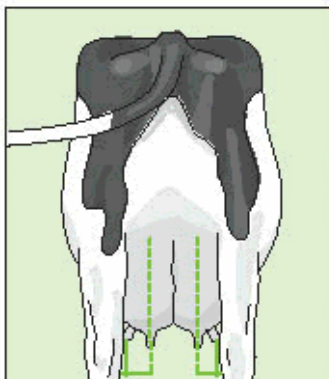


**9**  
**Shallow**

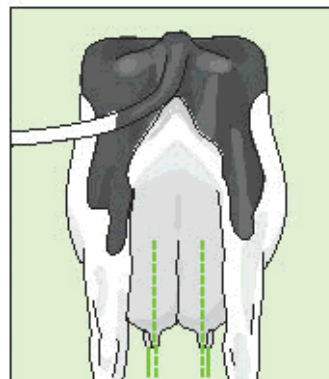
## 13: Front Teat Placement (FTP)

**Ref. Point:** The position of the centre of the front teat placement at the point of the udder as viewed from the rear:

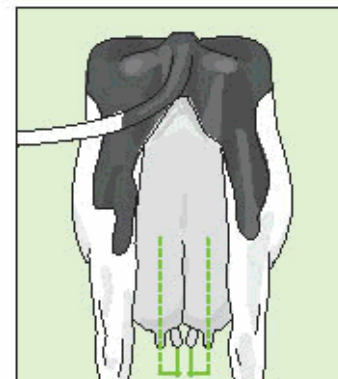
- 1 – 3 Outside of quarter
- 4 – 6 Middle of quarter
- 7 – 9 Inside of quarter.



**1**  
**Outside**



**5**

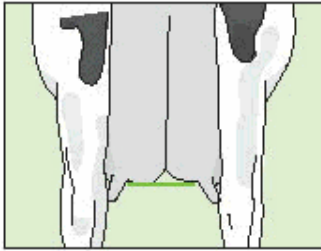


**9**  
**Inside**

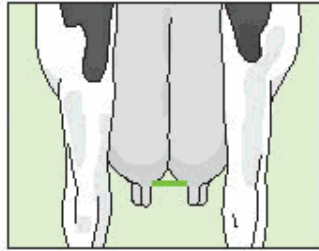
## 14: Rear Teat Position (RTP)

**Ref. Point:** The position of the centre of the Rear Teat placement at the point of the udder as viewed from the rear:

- 1 – 3 Outside of quarter
- 4 – 7 Middle of quarter
- 8 Touching
- 9 Crossing



**1**  
**Outside**



**5**



**9**  
**Inside**

## 15: Teat Placement Side View (Unique to the UK)

**Ref. Point:** The distance between the front and rear teats

- 1 – 3 Close
- 4 – 6 Intermediate
- 7 – 9 Far Apart

**No Picture Available**

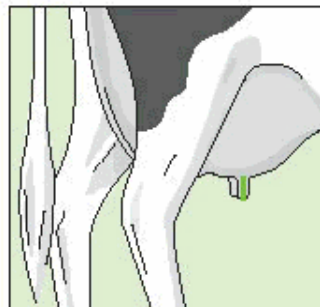
## 16: Teat Length

**Ref. Point:** The length of the front teat:

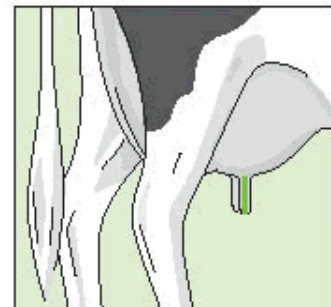
- 1 – 3 Short
- 4 – 6 Intermediate
- 7 – 9 Long



**1**  
**Short**



**5**

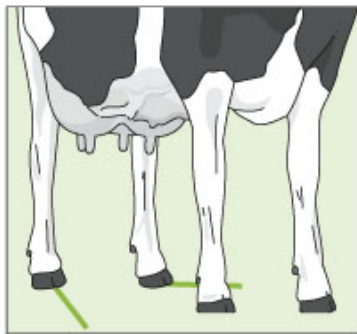


**9**  
**Long**

## 17: Locomotion

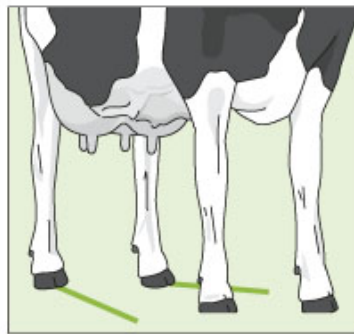
**Ref. Point:** The use of legs and feet, length and direction of the step

- 1-3 = Severe Abduction – Short Stride
- 4-6 = Slight Abduction – Medium Stride
- 7-9 = No Abduction – long stride

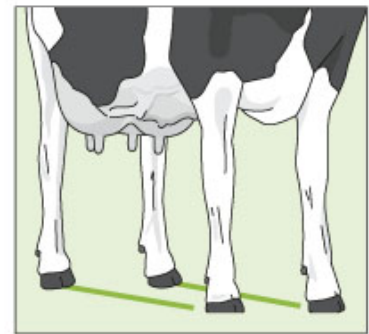


1

Severe Abduction/Short Stride



5



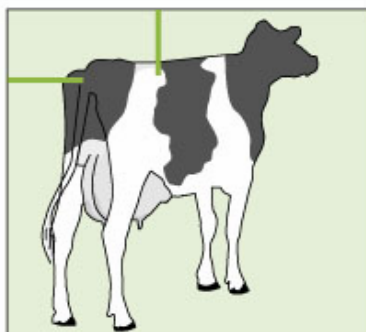
9

No Abduction/Long Stride

## 17: Body Condition Score (UK Research Trait)

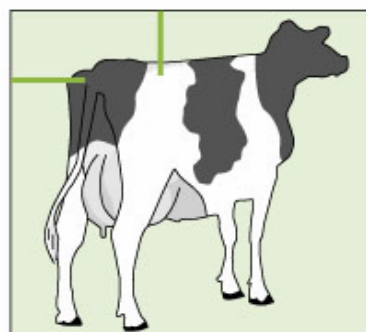
**Ref. Point:** The relative fatness or body composition of the cow

- 1 Poor Condition
- 5 Average
- 9 Grossly Fat

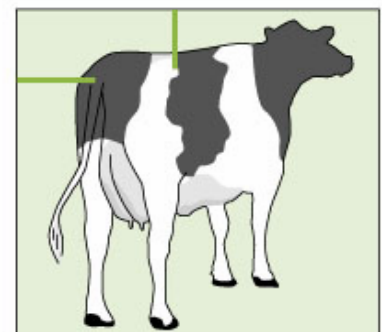


1

Poor



5



9

Grossly Fat

# **RECORDING OF ADDITIONAL HEIFER TRAITS**

## **Temperament**

- |   |                        |
|---|------------------------|
| 1 | Vicious                |
| 2 | Very nervous           |
| 3 | Nervous                |
| 4 | Slightly nervous       |
| 5 | Average                |
| 6 | Slightly above average |
| 7 | Quiet                  |
| 8 | Very quiet             |
| 9 | Placid                 |

## **Milking Speed**

- |   |                        |
|---|------------------------|
| 1 | Very hard              |
| 2 | Hard                   |
| 3 | Slow                   |
| 4 | Slightly below average |
| 5 | Average                |
| 6 | Slightly above average |
| 7 | Fast                   |
| 8 | Very fast              |
| 9 | Runs milk              |

# **BULL CLASSIFICATION**

Bull must be a minimum of two years old.

Five main characteristics will be evaluated on a numerical basis, each having a maximum value of 20 points. These will be totalled to give a final class and score.

Scoring 20%

**97 – 20**  
**95 – 19**  
**90 – 18**  
**85 – 17**  
**80 – 16**  
**75 – 15**  
**70 – 14**  
**65 – 13**  
**60 – 12**

Mid scores – please round up or down, eg. 87 = 17, 88 = 18.

The scale of each class will be the same as female classification.

Visit may be for bull classification only – not part of female TCS.

Classification by region.

Registration certificates must be produced for identification and endorsement, with appropriate classification.

Bulls may be presented for up-pointing or re-classification and cannot be down-pointed/down-graded.