

# PHENOTYPIC PRESENTATION OF HEREDITARY DEFECTS

*Compiled By*

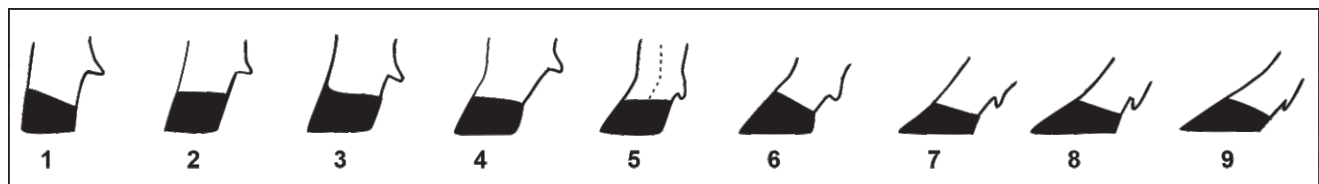
**Pakistan Brahman Breeders Association**  
Mediacom Trade City, Jaranwala Road - Faisalabad  
041-111-888-300, 041-850-233-7  
[www.brahman.pk](http://www.brahman.pk)

**HOOF:**



Score	Status	Detailed description
5	Ideal	A score of 5 is ideal
4 & 6	Acceptable	Animals having scores of 4 & 6 are acceptable in any breeding program
3 & 7	Not acceptable	Animals having scores 3 & 7 can only be used for commercial breeding, not for stud breeding
1, 2, 8 & 9	Extreme	Animals having scores of 1, 2, 8 & 9 must be culled

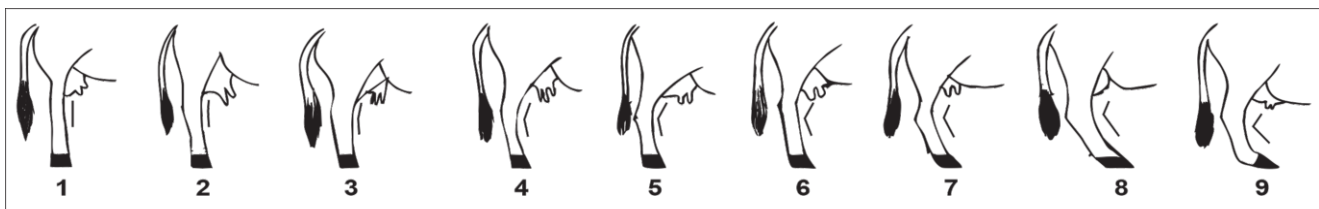
**PASTERN:**



Score	Status	Detailed description
5	Ideal	A score of 5 is ideal
4 & 6	Acceptable	Animals having scores of 4 & 6 are acceptable in any breeding program
3 & 7	Not acceptable	Animals having scores 3 & 7 can only be used for commercial breeding, not for stud breeding
1, 2, 8 & 9	Extreme	Animals having scores of 1, 2, 8 & 9 must be culled

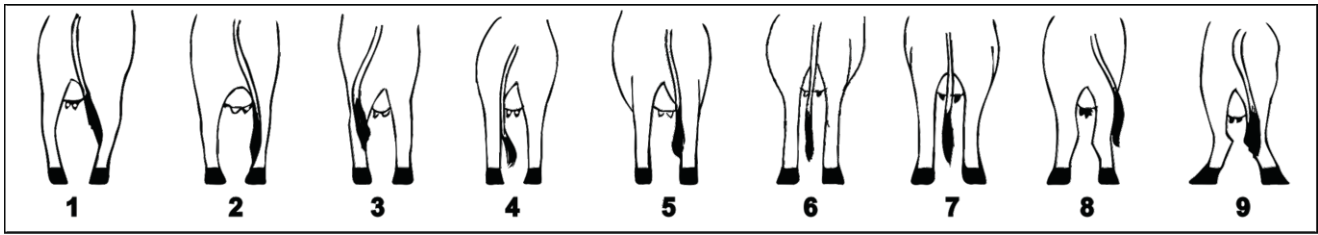
**Note:** These scoring parameters include strength of pastern, depth of heel and length of hoof.

**ANGLE OF HIND LEGS AT THE FRONT OF THE HOCK:**



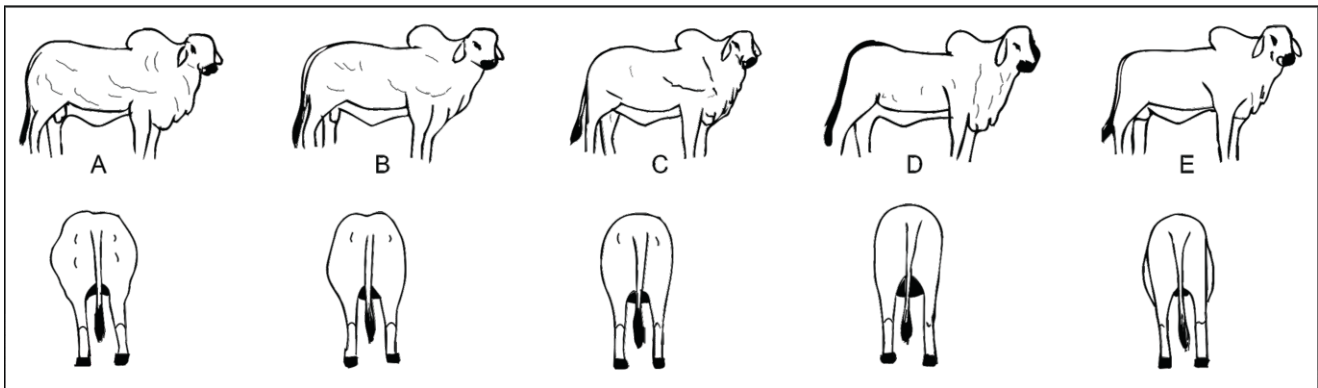
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5	Ideal	A score of 5 is ideal
4 & 6	Acceptable	Animals having scores of 4 & 6 are acceptable in any breeding program
3 & 7	Not acceptable	Animals having scores 3 & 7 can only be used for commercial breeding, not for stud breeding
1, 2, 8 & 9	Extreme	Animals having scores of 1, 2, 8 & 9 must be culled

**REAR VIEW ANGLE OF HIND LEGS:**



Score	Status	Detailed description
5	Ideal	A score of 5 is ideal
4 & 6	Acceptable	Animals having scores of 4 & 6 are acceptable in any breeding program
3 & 7	Not acceptable	Animals having scores 3 & 7 can only be used for commercial breeding, not for stud breeding
1, 2, 8 & 9	Extreme	Animals having scores of 1, 2, 8 & 9 must be culled

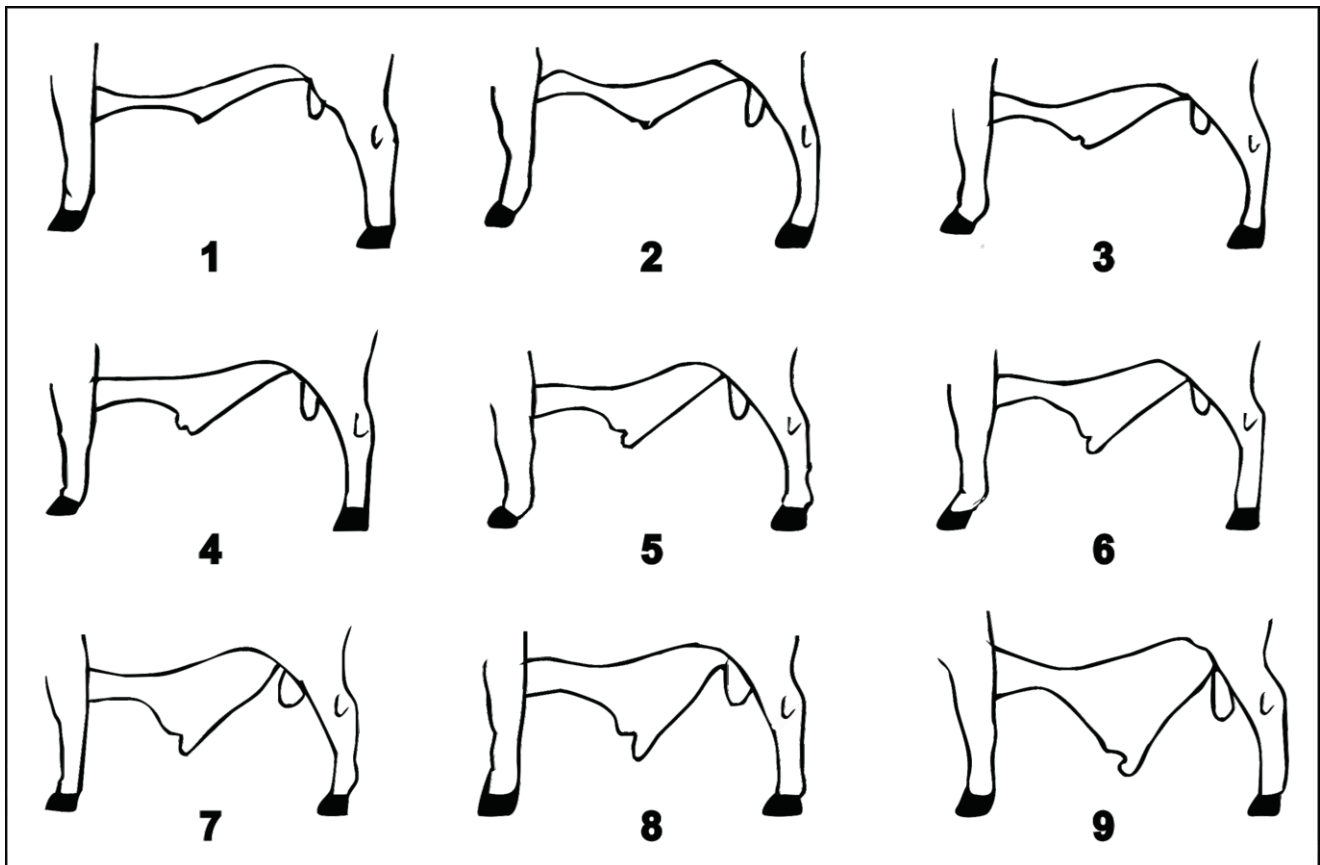
**MUSCLING SCORE:**



Score	Status	Detailed description
A	Double Muscled	A indicates pronounced creasing between muscles
B	Heavily muscled	B shows well-rounded hindquarter
C	Average muscle	Slightly rounded hindquarters
D	Poor muscle	Narrow & concaved hindquarters
E	Extremely poor muscle	Angular appearance

**Note:** Animals having muscle score A & E must not be considered for stud breeding.

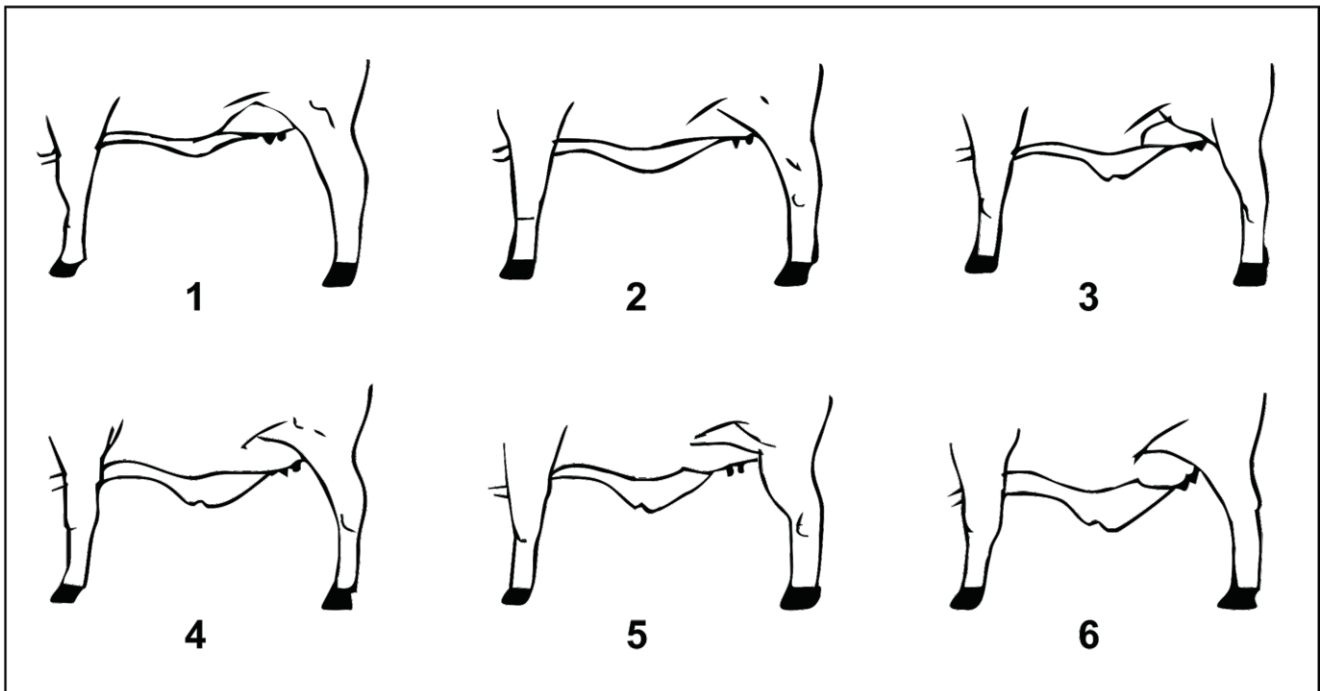
**SHEATH SCORING:**



Score	Status	Detailed description
1-3	Tight	Moderately tight sheath, close to abdominal wall and depth up to 10 cm with retractor prepuce muscle and moderate sized preputial opening, acceptable for stud breeding
4	Small	Sheath hangs at 45° Angle & depth up to 15cm, moderate umbilicus, acceptable for stud breeding
5-6	Moderate	Pendulous sheath hangs at 45° Angle with depth less than 20cm, and larger umbilicus, acceptable for stud breeding
7	Large	Sheath hangs at up to 90° angle, with excessive looseness of umbilical area and depth just above hock-knee horizontal line, acceptable for commercial breeding
8-9	Very large	Sheath hangs at up to 90° angle, excessive looseness and length of umbilicus, sheath depth at or below hock-knee horizontal line, often with eversion of the preputial mucosa, should be culled

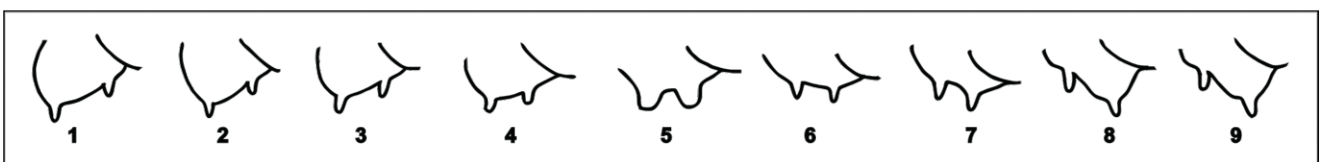
**Note:** The sheath opening should not be excessively large and its weight should be light. The prepuce should be under control and not protrude for excessive periods of time.

**NAVAL FLAP SCORING IN FEMALES:**



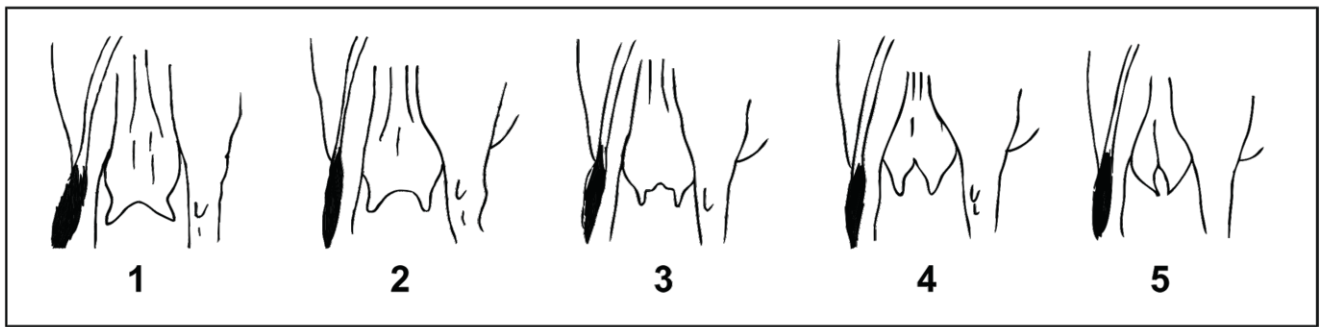
Score	Status	Detailed description
1-4	Acceptable	Females with score 1-4 can be used in stud breeding
5-6	No acceptable	Only acceptable for commercial breeding where male progeny of such dams is castrated
<b>Note:</b> Naval flap is believed to have correlation with sheath size in bulls.		

**UDDER EVENNESS SCORE:**



Score	Status	Detailed description
5	Ideal	A score of 5 is ideal
4 & 6	Acceptable	Animals having scores of 4 & 6 are acceptable in any breeding program
3 & 7	Not acceptable	Animals having scores 3 & 7 can only be used for commercial breeding, not for stud breeding
1, 2, 8 & 9	Extreme	Animals having scores of 1, 2, 8 & 9 must be culled

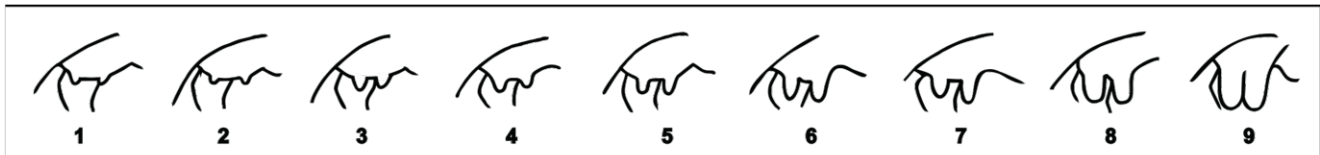
**UDDER ATTACHMENT:**



Score	Status	Detailed description
1	Extremely low or weak attachment	Females having score 1 may be acceptable for commercial breeding but not for stud breeding
2	low or weak attachment	Females having score 2 are acceptable in any breeding program
3	Ideal attachment	Score of 3 is ideal and females having score 1 are acceptable in any breeding program
4	Strong or high attachment	Females having score 4 are acceptable in any breeding program
5	Extremely strong or high attachment	Females having score 6 may only be used for commercial breeding, not for stud breeding

**Note:** Strength of the median and lateral suspensory ligaments or rear udder attachment and strength of fore udder attachment to the abdominal wall should be considered.

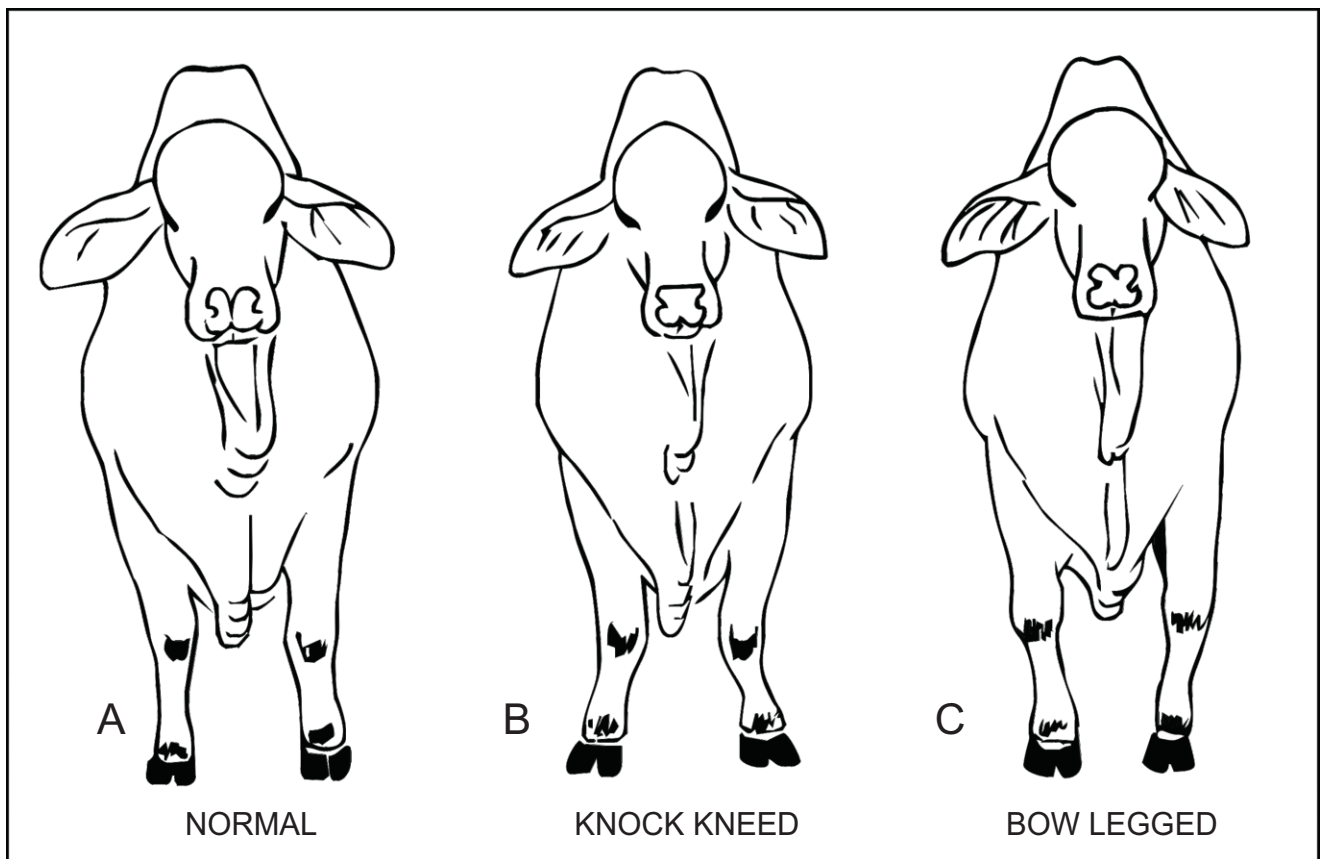
**TEATS SCORING:**



Score	Status	Detailed description
3	Ideal	A score of 5 is ideal
2 to 5	Acceptable	Animals having scores of 2 to 5 are acceptable in any breeding program
6 & 7	Not acceptable	Animals having scores 6 & 7 can only be used for commercial breeding, not for stud breeding
1, 8 & 9	Extreme	Animals having scores of 1, 8 & 9 must be culled

**Note:** Teat scoring indicates the size and shape of four main teats for first calved heifers. Consideration should be given to deterioration with successive calvings. The objective is to have a female capable of rearing at least seven calves through a productive life of at least 10 years.

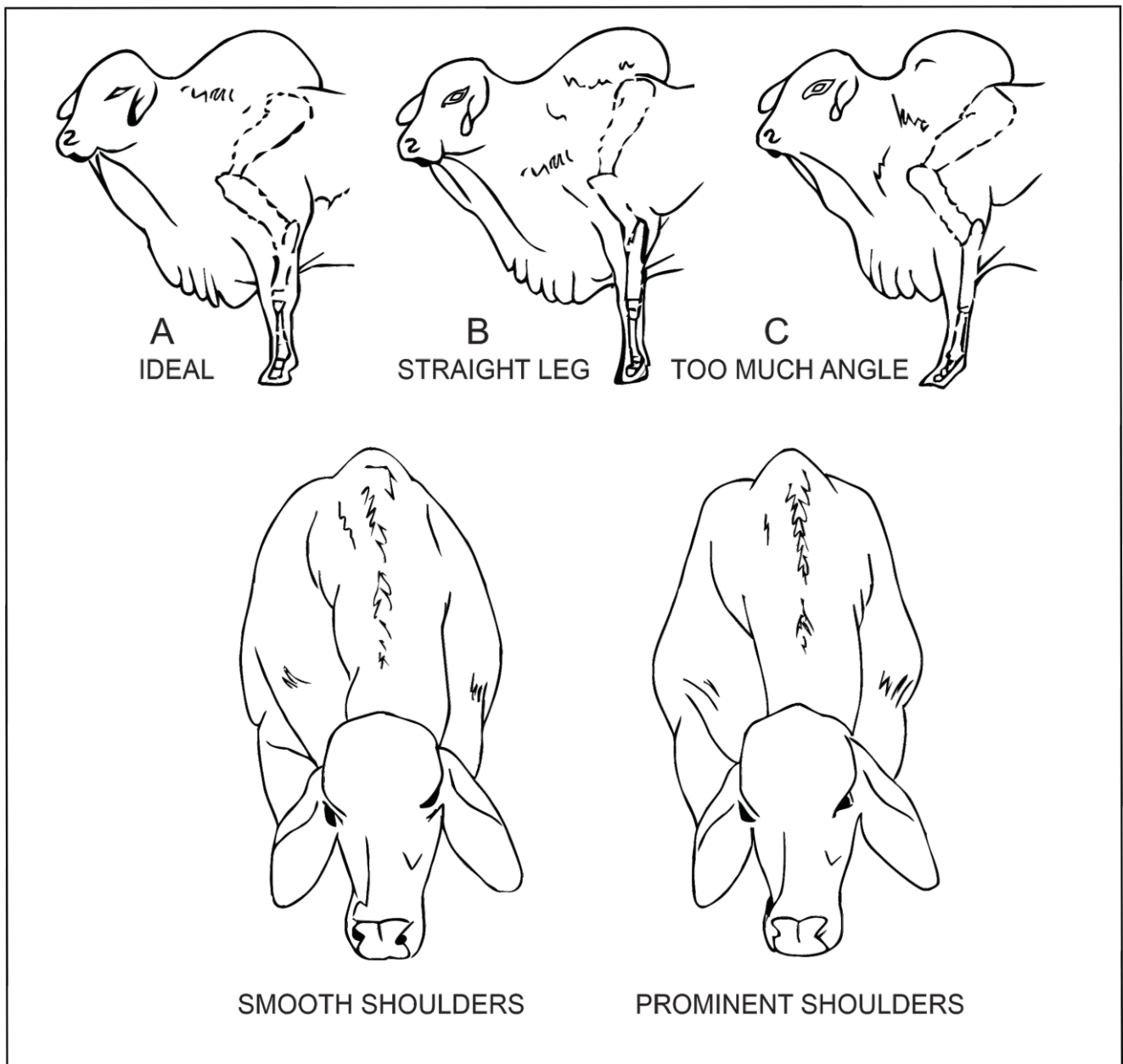
**FRONT LEGS:**



Score	Status	Detailed description
A	Acceptable	Straight forelegs when viewed from the front, ideal for any breeding program
B	Not acceptable	Knock knee (knees bent inward), not acceptable for stud breeding
C	Not acceptable	Bow legged (knees curved outward), not acceptable for stud breeding

**Note:** It is normal structure for front feet to be slightly turned out. As the knee joints carry over half the bull's body weight, knock kneed or bow leg causes excessive wearing of these joints.

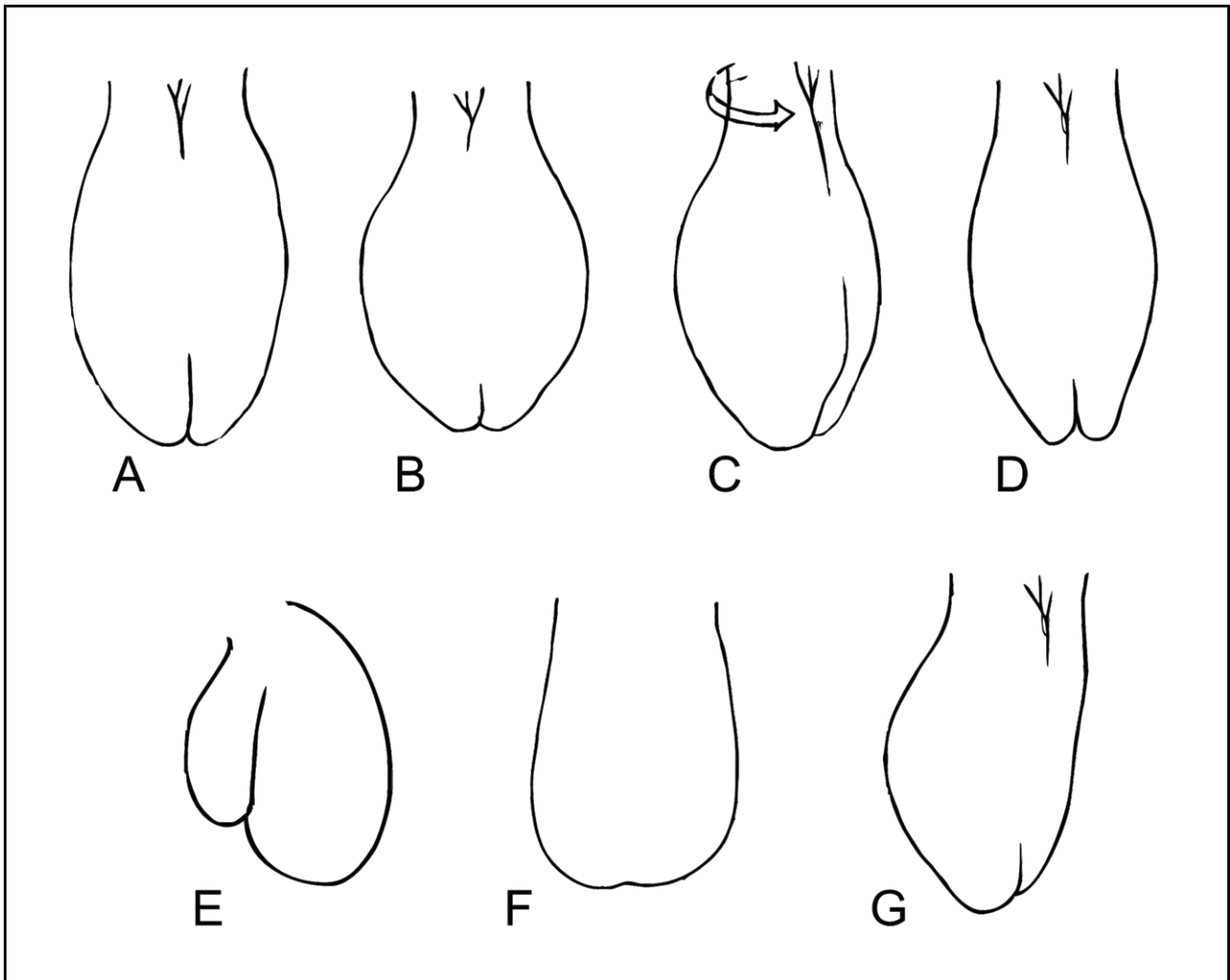
**SHOULDERS:**



Score	Status	Detailed description
A	Acceptable	Smooth and normal angle of shoulder against the rib cage, acceptable for any breeding program
B	Not acceptable	Straight leg and prominent shoulders, not acceptable for stud breeding but acceptable commercial breeding
C	Not acceptable	Too much angle and prominent shoulders, not acceptable for stud breeding but acceptable commercial breeding



**SCROTAL APPEARANCE:**



Score	Status	Detailed Description
A	Normal (elongated)	Ideal shape, acceptable for any breeding program
B	Normal (rounded)	Acceptable for any breeding program
C	Lateral rotation	Not acceptable for stud breeding
D	Distinctly cleaved scrotum	Not acceptable for stud breeding
E	Unilateral hypoplasia	Not acceptable for stud breeding
F	Scrotal hernia	Not acceptable for any breeding program, animal must be culled
G	Incomplete descent of one testicle (cryptorchidism)	Not acceptable for stud breeding

**Note:** A pendulous scrotum is susceptible to injury and young bulls with pendulous scrotum should not be considered as there can be a natural distension of the scrotum with age due to relaxation of the Cremaster Muscles.

<b>Scrotal size (cm)</b>	<b>Maximum weight (Kgs) at which scrotal size is acceptable</b>
28	400-425
29	425-450
30	450-475
31	475-525
32	525-575
33	575-625
34	625-725
35	725-950
<b>Note:</b> Caution should be taken with testicles size above 45 cm.	

### **SCROTAL SIZE:**

### **TEMPERAMENT:**

Temperament is a highly heritable trait. It can be measured as “flight speed”. It is the amount of time an animal takes to pass between two measuring points after it is released. The higher the reading, the slower the animal moves, the more docile is its temperament.

Animals with poor temperament are not only dangerous to handle, but studies have also shown that it has a negative impact on meat tenderness. Therefore, it is important to cull the animals with bad temperament.

### **GENETIC DEFECTS AND ABNORMALITIES:**

Animals having abnormalities of genetic origin for example Hernia, Stringhalt, twisted nose, Cleft palate, Achondroplasia, Alopecia, Double muscling, Ankylosis and Cryptorchidism etc. should be disposed of immediately to avoid such occurrence in future progeny.

### **HORNED AND POLLED ANIMALS:**

Polled animal has no evidence of horn growth, while horned animals could have a distinctive raised crown or scurred horn on their head. In beef industry, polled animals are preferred.

# VERSION 2022



A definitive guide to  
the Brahman breed characteristics

Includes guidelines which describes  
the ideal characteristics, temperament  
and appearance of the Brahman breed.



Compiled by the  
**Pakistan Brahman Breeders Association**

