

## Section ( 10 )

### CLINICAL EXAMINATION OF THE BULL

#### **I - Identification of bull & general informations :**

1. Species: bull or buffalo bull.
2. Breed: Jersey, New Jersey, Friesian, Short horn....etc.
3. Age: age of puberty → age of sexual maturity 6 months after puberty
4. Marks
5. Name of animal ( if present )
6. Nutritional behavior, ration, vaccination program.
7. General body condition
8. Previous diseases

#### **II - Breeding history:**

1. Previous reproductive behaviour .
2. Assessment of fertility  
Which include:
  - Date of last mating, and if the cow return to heat after insemination or not.
  - Sire index: number of services / conception (normal= less than 2.0)
  - Conception rate: number of inseminated female which not return to estrus (55-60% from 1<sup>st</sup> service)
  - Calving rate: number of cows that calve a life newly born / total number of cow inseminated.
3. Assessment of libido: sexual desire estimated by reaction time.
4. Progeny test:
  - ❖ Aimed for selection of the best bull genetically bull through some factors appears in its generation.
  - ❖ Take about 3:4 years.
  - ❖ From 20-30 female are mated by bull, then examined for:
    - Conception rate: related to lethal factor.
    - Calving rate: related to congenital diseases.
    - Productivity.
    - Induce of silent heat.

### **III - General clinical examination :**

#### **A. Anatomical soundness (description)**

##### **1. Secondary sexual characters:**

- Heavy shoulder musculature.
- Facial look.
- Thicker skin.
- Massive bones.
- Large horns.
- High limbs.
- Narrow pelvis.

##### **2. Body conformation**

- Condition of claws.
- Examination of the gait (Lameness → stress → increase cortisol which antagonize GnRH)

##### **3. Senses ( vision & hearing )**

#### **B. Soundness of general health condition**

1. Skin of animal  
Absence of hairless area or showing shin parasite.
2. Body condition score  
Emaciated animal (0) indicate chronic diseases (e.g.: internal parasite, T.B,....etc)
3. Nutrition
4. Visible mucous membrane  
Normal: rosy red color.  
Dark red congested: inflammation.  
Pale color: anaemic.  
Yellow color: jaundice.
5. Body temprature
6. Respiratory rate
7. Pulse rate , heart sound
8. Palpation of lymph node

#### **IV - Special clinical examination:**

##### **A. External genitalia :**

##### **1) Scrotum :**

- Position of scrotum: which change in relation to environmental temperature.
- Size & asymmetry
  - ❖ Normal two scrotal pouches are symmetrical in size.
  - ❖ Enlargement: inguinal hernia, tumor → pressure atrophy.
  - ❖ Smaller: cryptorchidism, atrophy, hypo or aplasia of testis.
- Measurement of skin thickness (using caliper)

Examined for presence of outside scars

##### **2) Testes :**

- Mobility
- Size ( Testicular volume )
  - Testicle of dairy breed bull is larger than beef breed bull.
  - T.volume= (Length x Breadth x Thickness) x 0.52
  - Length & Breadth measured by (Testimeter)
  - Thickness measured by (Testicular caliper)
- Consistency:
  - ❖ Normally firm.
  - ❖ Soft & fluctuated → presence of abscess
  - ❖ Hard & fibrotic → chronic orchitis.
- Shape
- Location & temp.

##### **3) Epididymis**

- ❖ Palpate tail consistency to determine frequency rate of sexual use.
- ❖ Enlargement → spermatocele due to accumulation of spermatozoa.

**4) Spermatic cord & inguinal canal**

- ❖ Examined for size (band of 3 cm.) and symmetrically.
- ❖ Uni or bilateral distension of inguinal canal may be due to hernia, abscess, haematoma or inflammation

**5) Free movement of penis & sigmoid flexure :**

- In retracted position  
Penis from free end (glans penis) to sigmoid flexure can be palpated through skin of prepuce and abdominal wall
- Protrusion of penis  
Only possible by relaxation of retractor penis muscle by epidural anaesthesia or blocking nerve dorsalis penis or pudendal nerve.
- Penis examined for:
  - ❖ Movability within prepuce (adhesion → phimosis)
  - ❖ Presence of neoplasm or injuries.
  - ❖ Body examination for presence of fracture (broken penis), or haematoma.

**6) Prepuce:**

- Normal:
  - ❖ Preputial opening is covered by tuft of hair, diameter 2-3 cm.
  - ❖ Very narrow opening → phimosis
  - ❖ Narrow opening → paraphimosis.
- Acute lesion: induce pain.
- Preputial cavity: palpated externally for presence of abscesses, scars or adhesions.

## **PREPUTIAL WASHING**

### ❖ **Aim of preputial washing:**

For collection of specimen from internal crypts of prepuce → for laboratory diagnosis of some venereal diseases e.g. trichomoniasis, vibriosis.

### ❖ **Requirements:**

- Bottle of 250 ml. capacity or large syringe 100ml.
- Long rubber tube of 0.5 diameter pass easily inside glass tube (plastic sheath).

### ❖ **Procedures:**

- Bull is completely restrained, equipments are sterilized.
- Disinfection tips of prepuce with antiseptic solution after washing with soap & water.
- 1<sup>st</sup> half of sheath is smeared with little amount of Vaseline, then introduced inside prepuce of 10 cm. distance.
- At this point close preputial opening by holding prepuce around tube with left hand.
- Push sterile solution inside prepuce.
- Irrigation of prepuce by thoroughly massaging for at least 2 min., then return the specimen solution to the bottle and immediately cooling to 2-4 c, then transferred to lab. for centrifugation and examination.

### **Precautions:**

- If urine collected with washing solution, try to collect another sample after 3 days.
- Avoid rectal palpation or any internal examination before preputial washing which stimulate accessory gland secretions.
- Avoid semen collection before preputial washing.

