

*Artificial  
insemination*

# Methods of semen collection

- **A.V**
- **E.E**
- **M.M & D.M**
- **URETHRAL FISTULA**
- **CANDOM**

# (E.E) ELECTROEJACULATOR

- Depend upon
- Advantages
- Disadvantages
- The set
- Semen character
- Technique

# E.E

Depends upon :

applying a series of **short, low- voltage** pulses to the sacral nerves which are involved in the ejaculatory response

# Advantages

It can be used with almost any mammal.

.The only technique for **anesthetized wild** animals.

- It can be used with animals having **musculoskeletal disease or injury**.
- be used with animals having **low libido & old bull**
- Need **few workers**    need **no experience**
- Bulls **fright** from people ( natural mating )
- Need **no sexual** stimulation    need no **teaser** or even females

# Disadvantages

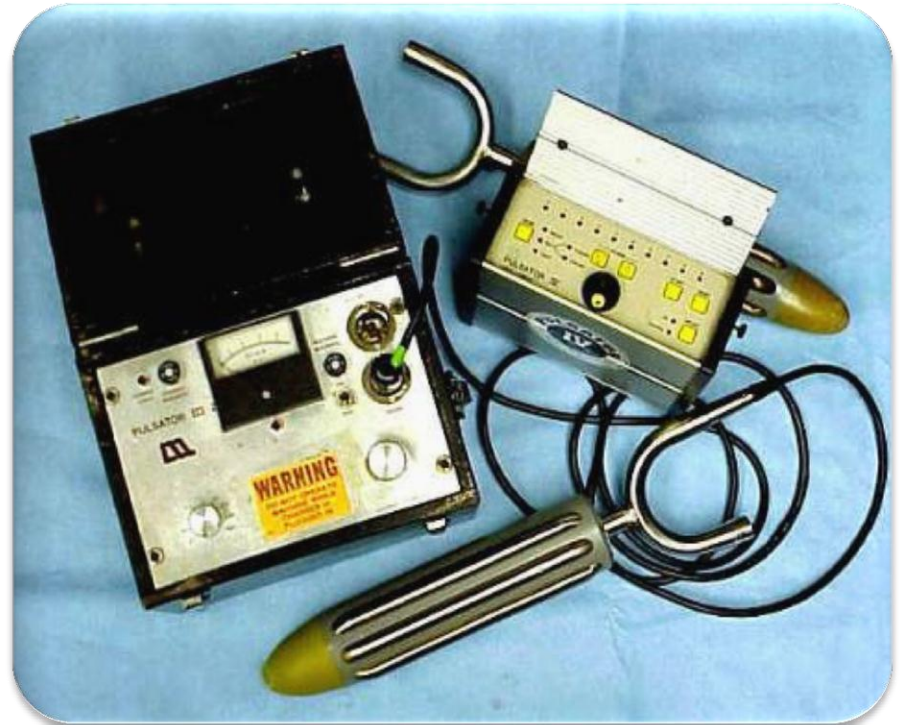
- missusage ( **over stimulation** may lead to nervous **shock** or even **death**
- Over motor stimulation may lead to sever tremor or **falling** of the animal or **fracture**
- The equipment is **expensive**

# Semen character

- Higher volume (due to excessive accessory gland secretion)
- Higher PH
- Relative low S.C.C
- Low fructose
- Fertilizing capacity is better than the semen collected by AV

# Components of the equipment

- Power supply
- Control unit
- Rectal Probe







# N.B

- Ram need low voltage than bull
- Boar need high voltage due to excess body fat
- Low voltage..... erection
- High voltage ..... Ejaculation
- E.E not used in .....

# Artificial vagina (A.V)

- Depend on
- Components
- Requirments
- Before collection
- N.B

# Depend on

- **Simulation** of natural condition of the female vagina
- ( **Thermal** and **mechanical** condition )

# Components

- Artificial vagina is composed of:
  - a. Rigid **rubber casing** with an opening.
  - b. Rough-textured latex **inner liner**
  - c. Rubber **band**
  - d. Rubber **funnel**
  - e. Graduated glass collection **tube**
  - f. Insulated and zippered **jacket** during cold season



# Requirments

- **Hot water** at a temperature **50 C at filling** to reach **42°C and 45°C** at time of collection
- A.V. **Buffaloes bulls** prefer much higher temperature up to **50**
- **Higher temperature** lead to:
  1. dismounting and early ejaculation
  2. Burninig to glans penis
  3. Heat shock to the sperms
- **Lower temperature** lead to excessive and frequent thrust and delay or no ejaculation

- **Pressure** :

is maintained in the artificial vagina by air inflation till bulging of the inner liner which act as acausion

- **Lubrication**

first 3-2 inches of the interior of the liner

should be thinly coated with a sterile lubricating jelly or liquid paraffin

**Excess lubricant** lead to false viscosity & aggregation of sperms

The lubricant should **not be spermicidal**



# Before collection

Preparation of bull (Cleanliness & Sexual preparation)

## **Cleanliness:**

Bulls should be as free of dirt as possible to avoid contamination of semen.

The long **hairs at the sheath** of the penis should be kept clipped.

**Too close clipping** of the sheath is avoided because of the possibility of **irritation**.

Washing may be essential to remove manure and dirt on the extremely dirty underline. This should be done **longtime enough** before the collection

# sexual stimulation

- **Retraining** bulls for **few minutes** in the teaser area before allowing them to serve the A.V.
- **false mount** increases sperm output

generally sexual preparation lead to a considerable  
**increase in the volume** of semen  
and the **number of spermatozoa** obtained

# PLACE AND TEASER

- It is important that the collection area have **non-slip flooring**.

## THE TEASER

- **A steer** is most commonly used as a teaser.
- **Female teasers** are not recommended because of:
  - a- The potential risk of intromission and
  - b- Spreading of venereal disease.
- The teaser should be **calm**
- **appropriate size** .
- The back and rear quarters of the teaser are **washed with a disinfectant**

# N. B

watch **your foot** during collection from bulls

watch **your head** when collect from stallion( wear helmet)

**E.E** is not used in **stallion**

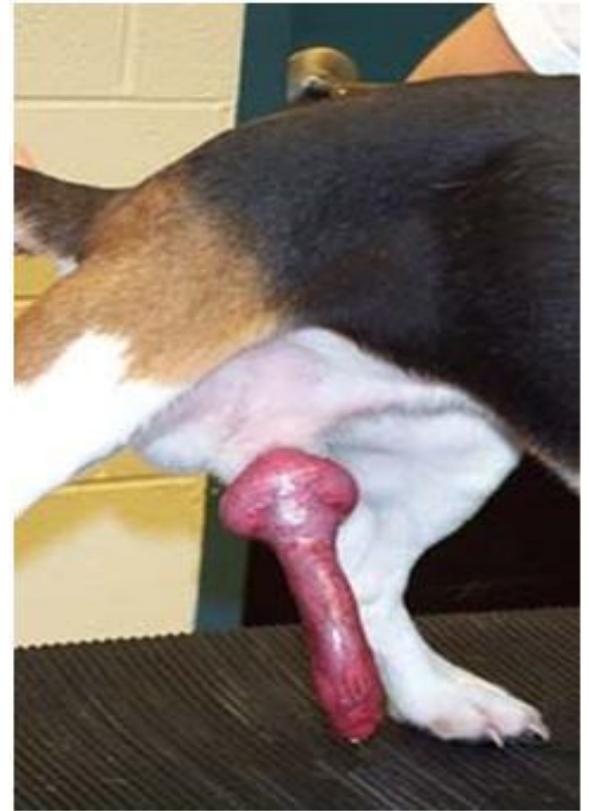
**Dummy** may used as teaser for stallion

Collection **bottle** used in stallion due to larger volume

# Digital Manipulation

- It is commonly used for collecting semen from **pigs and dogs** by applying **pressure and massage to the penis**.
- After the male becomes aroused, a director cone of some type, attached to a collection tube, is slipped over the penis to facilitate harvesting the semen
- 
- Semen is collected routinely from chickens and turkeys using a form of digital manipulation





# Rectal massage

- It is used occasionally with **bulls** to stroke the ampullae, seminal vesicles and prostate gland through the wall of the rectum
- In almost all cases, the bull must be restrained standing in a chute and **sedated** to allow relaxation and extrusion of the penis.

# Increasing sex drive reduced from handling bulls in the same manner

: •

- a. Introducing a **new teaser** animal
- b. Moving teaser animal to **different area**
- c. Presenting 2 teasers
- d. Allowing teaser or another bull to **mount the bull** to be collected
- e. **Bringing new bull** into the collection area
- f. Collecting semen from **new bull**







