

# Semen Collecting

# METHODS

- From Vagina
- Breeding bag
- Message method
- Artificial vagina
- Electroejaculator
- Digital manipulation

From Vagina:

The semen takes from vagina by spoon or by a sponge.

Disadvantage

- 1-Semen contaminated with the secretion of genital system and with bacteria.
- 2-Disease transmission may be occurs.

Message method:

-By pressing on the seminal vesicles or ampulla through rectum. -Used in male which cannot be mount.

Disadvantages:

1-Semen may contaminated with urine.

2-Bad quality of semen.

3-May cause damage to rectum.

# COLLECTION OF SEMEN

## Artificial Vagina Method (AV)

Parts of AV :

- 1** - outer casing.
- 2**- inner liner.
- 3** - collection funnel (semen receiving cone).
- 4** - collection tube .
- 5** - insulating protector of collection funnel.
- 6** - insulating protector of collection tube .

**outer casing:** made from hard rubber or metal and long of outer casing difference according to age and species of male . Generally mature bulls require an outer rubber casing 40 cm in length and 6.4 cm in diameter, while yearling bulls require a casing 30 to 35 cm long and 5.1 to 5.7 cm in diameter. In case of goat and sheep the outer tube should be about 20 cm long and 5 cm in diameter.

**inner liner** (habituate rubber) must longer than outer casing used to forming space for filling with water  $\frac{3}{4}$  space must temperature ( general ,45-50 C° in hot month and 50-60 C° in cold months). and air  $\frac{1}{4}$  *(to production pressure 74-76 atmosphere for bull and less for ram and goat)* . Temperature during instant collection semen range from 40-43 C° and depending on training of male.

**collection funnel:** made from rubber funnel shape used for sending the ejaculate semen to collection tube which connection in the end of this funnel.

**collection tube :** semen collecting vial made of glass or plastic which may be graduated to evaluated the color and volume of semen.

**insulating protector of collection funnel :**  
**made from insulating material to prevent**  
semen (which ejaculate in collection funnel)  
from cold shock and sunlight .

**insulating protector of collection tube: Also**  
**made from insulating material to prevent**  
semen (which ejaculate in collection tube)  
from cold shock , sunlight ,and broken  
collection tube.



Prior to collection; all these parts are cleaned, sterilized and assembled into artificial vagina. The inner liner is put into the outer casing and both the ends of inner liner are reflected over the outer casing forming a water tight space between them and water at 45 - 60 C° is filled in there. The collection funnel along with the attached collection tube is then slipped over one of the ends of this water jacketed barrel and then tightly secured with the help of rubber bands.

# حصاره الجمع Collection Restrictive



تحضير المهبل الاصطناعي  
Preparation of A.V-First  
stage





## Preparation of A.V-Second stage



# Preparation of A.V- End stage



The collection tube and collection funnel are then invaginated into the artificial vagina and lubricated with sterilized jelly. Too high a temperature may cause injury to the penis and the bull may refuse to serve in future, whereas at lower temperature, there may not be complete ejaculation and the whole ejaculate may be contaminated with urine. During collection, the artificial vagina thus assembled, is held at an angle of 50° with the horizontal plane of the cow or dummy.

It is so because the penis of the bull enters the vagina of the cow at that angle. When the bull mounts the penis is quickly guided into the artificial vagina.. After the bull mounts, the artificial vagina is taken and allows the ejaculate to flow from the collection funnel to the collection tube, which is then detached from the collection funnel and taken to the laboratory for examination.

Artificial Vagina means the conditions in this instrument same in Natural vagina which be done by:

Temperature of body : water Temperature

Muscle pressure : Air pressure.

Vagina discharge : Jelly lubricant



# Artificial vagina



# Collection vial





## **Electro-ejaculation method**

Inserting a probe or electrode in sire's rectum and stimulating nerves of the reproductive system by gradually increasing voltage. The method is used on males of certain species where the use of A.V is not possible not practical, and also used to collect semen from bulls for A.I purpose when the bull is extremely slow in serving the A.V or physically incapable of mounting. Modern models of electro-ejaculators consist of a single rectal probe equipped with bipolar electrodes capable of producing ejaculation by electrical stimuli. The method of semen collection in bull is as follows:

- 1- At the beginning the rectum washed with 6 % sodium chloride solution.
- 2- The probe is then inserted up to about 12 inches and held in a position of rectal floor.
- 3- Alternate current increasing in voltage gradually from zero to 5 volts and returning again to zero within every 5 to 10 seconds initially -passed.
- 4- The subsequent stimulation made progressively higher so that at about fifth stimulus a maximum of 10-15 volts is reached. Erection and ejaculation occur at 10 to 15, volts when 0.5 to 1A am current is passed.

# Electroejaculators. On the right an 'automatic' machine.





Manual massage of the prostate, ampullae and seminal vesicles can also produce an ejaculate.

This is a good alternative for bulls that go down on electroejaculation.

You can massage the seminal vesicles to produce an erection and the ampullae to produce ejaculation.

- Palpation
  - Seminal vesicles
    - Epididymis
    - Ampulla
    - Vesicular glands
    - Prostate gland
    - Cowper's glands

# Bull and Ram

- Collect with
  - Electroejaculator
  - AV
  - Palpation
- Mount
  - Castrated animal
  - Cow/ewe
  - Dummy



# Stallions

- Collect with
  - AV
- Mount
  - Mare
  - Dummy (most common)



# Dogs and Cats

- Dogs
  - Manual collection
- Cats
  - AV collection