

*Artificial insemination
Technique*

**The object of insemination •
technique to place the semen in the
part of reproductive tract that will
give the best chances for conception**



Artificial Insemination

- ◆ Advantages
- ◆ Wider variety of superior bulls
- ◆ Increases number of cows bred to superior bulls
- ◆ Reduces the spread of diseases
- ◆ Don't have to keep bulls on the farm



Artificial Insemination

- ◆ Disadvantages:
- ◆ Requires a trained inseminator
- ◆ Requires more time and herd supervision

Methods of A.I.

- ***Trans vaginal .***
- ***Cervical Insemination: Using speculum.***
- ***Rectovaginal method.(best method)***
- ***Laparotomy.***
- ***Laparoscopy.***

Vaginal Insemination:

- 1-this methods simply inserting a tube into vagina.
- 2-deposition semen at the mouth of the cervix.
- 3-this procedure simulated a deposit of semen during natural mating.
- 4- need above 20 million motile sperm will result in a very low conception rate

• **Cervical Insemination:**

- **1- by inserting a sterile speculum into vagina with light source.**
- **2-deposition semen into opening of the cervix.**
- **3-conseption rate 10-20% lower than recto –vaginal insemination.**
- **4-disadvantage needed amount of equipment that must be sterilization between inseminations**

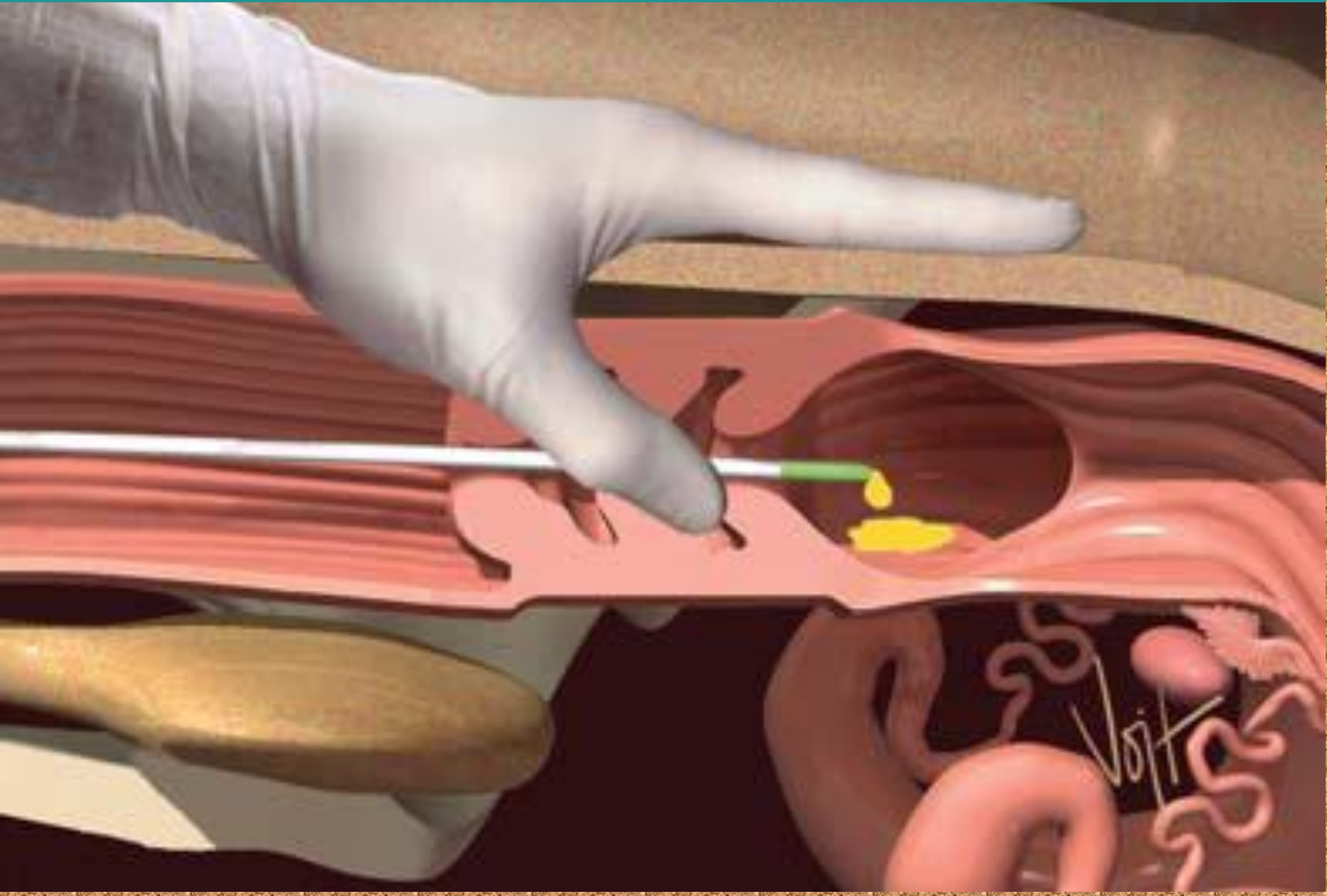
Timing of Insemination

- Success in insemination timing is dependent upon a good heat detection program.
- The right time of insemination based on the duration of estrus, the timing of ovulation, and the lifespan of the sperm and oocyte.

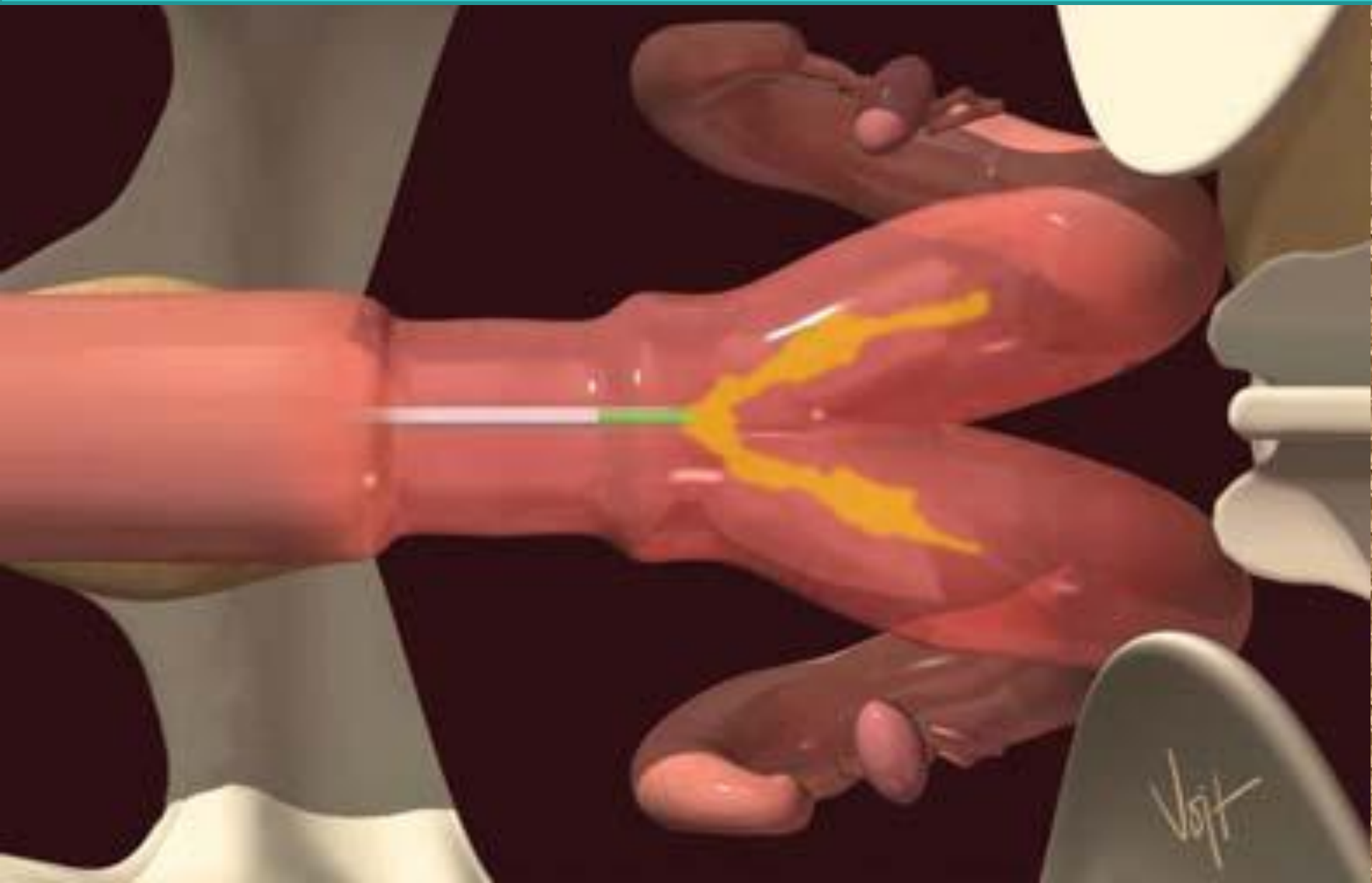
- **Ovulation occurs 12-14 hours after the end of estrus.**
- **The oocyte survive for 12-14 hours after ovulation.**
- **The sperm survive for 24-48 hours post-insemination.**
- **The best time of insemination is 12-18 hours after the beggining of the estrus.**

recto –vaginal insemination

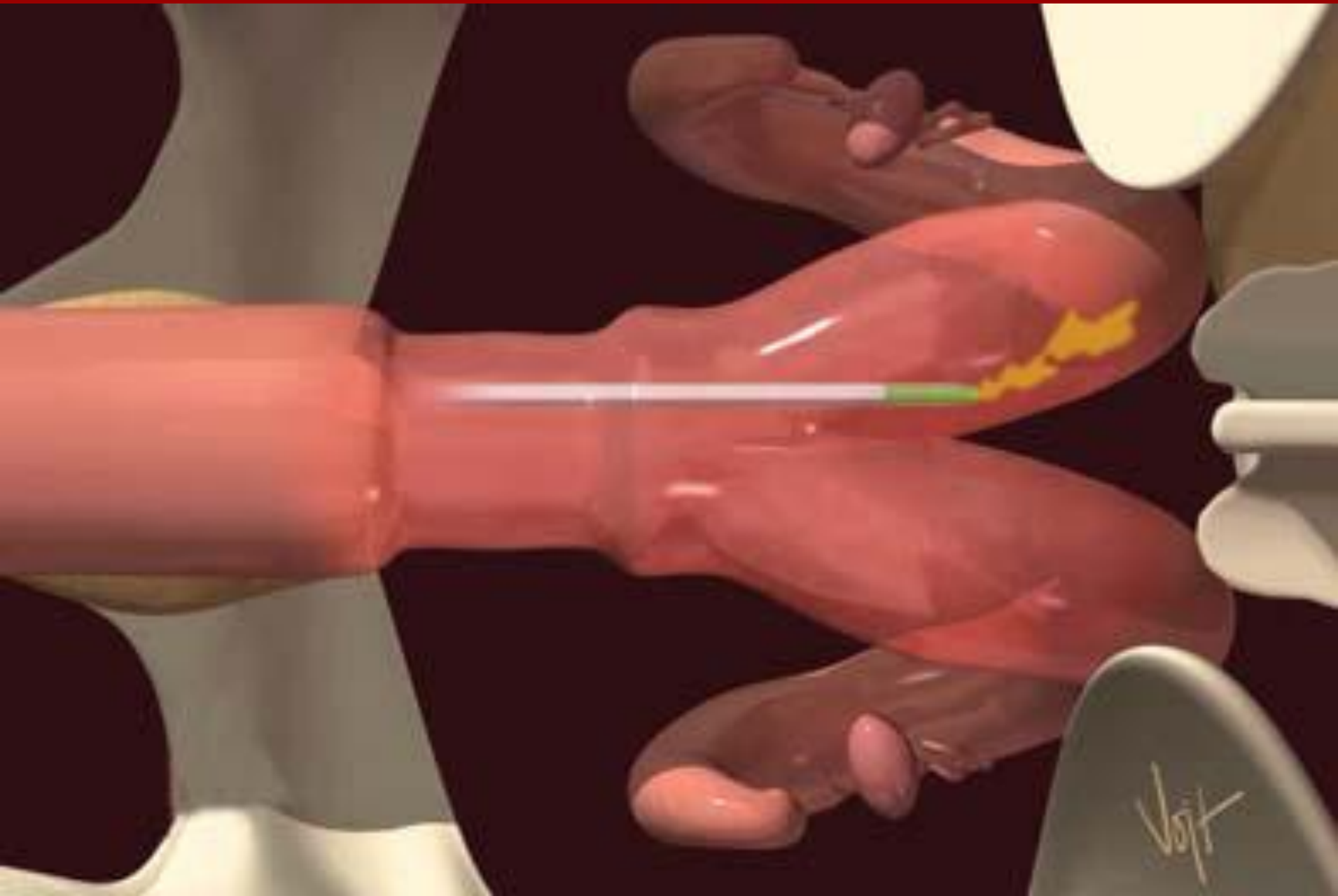
Push the plunger slowly so that drops of semen fall directly into the uterine body.



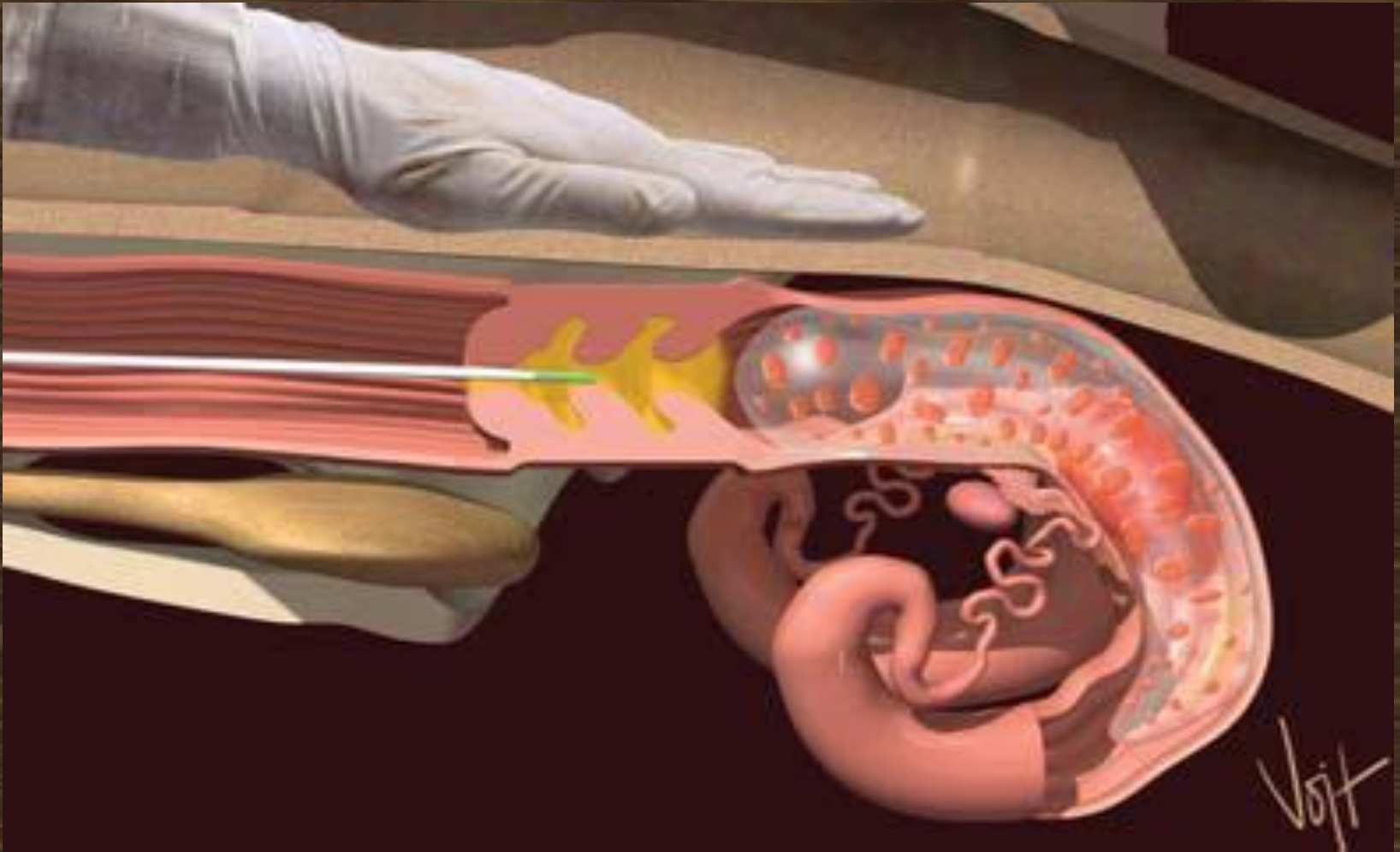
With proper A.I. technique and gun placement, semen will be deposited in the uterine body and contractions will transport spermatozoa forward to the horns and oviducts



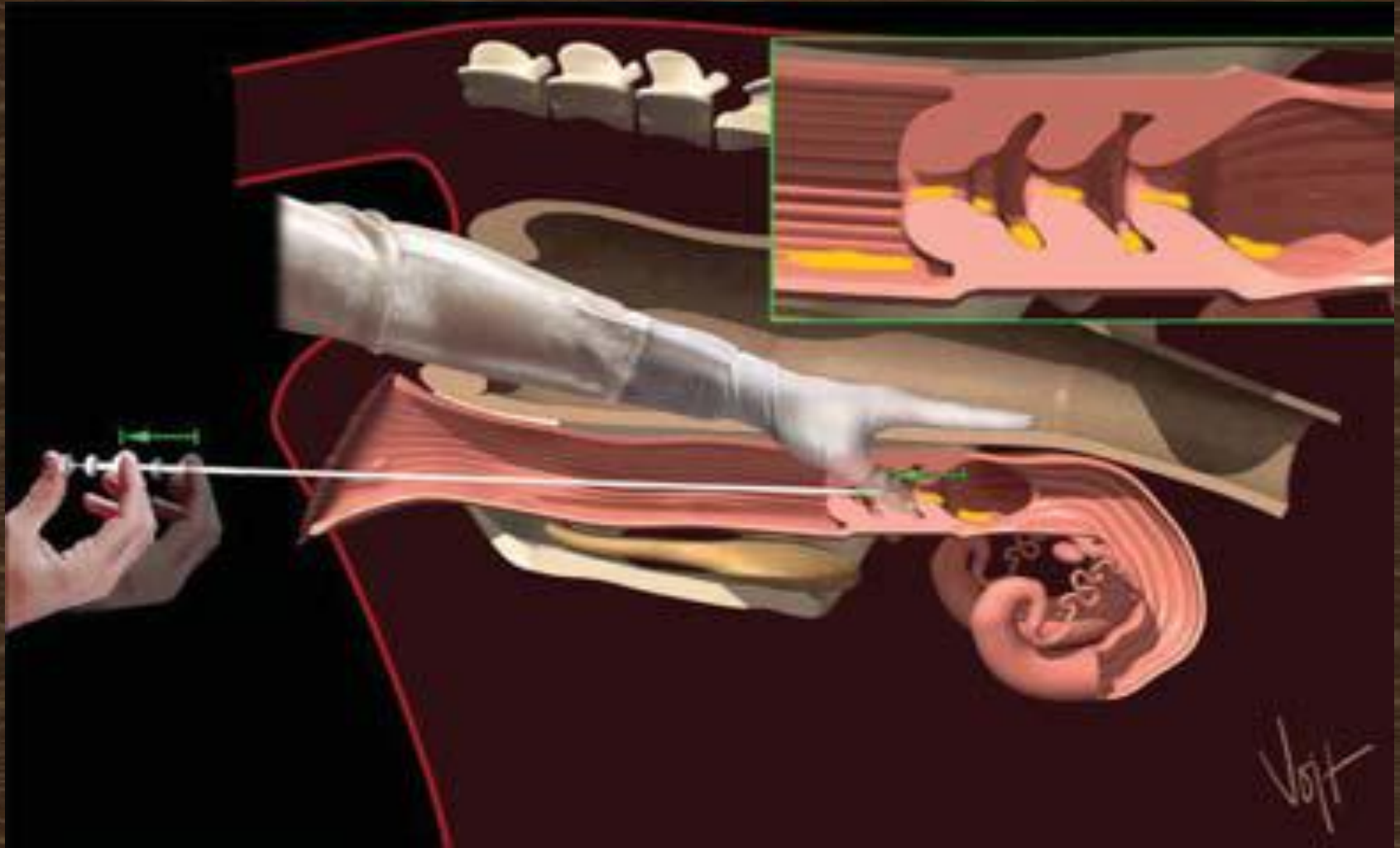
If the gun is more than 1 inch through the cervix, all the semen will be deposited into only one horn.



If the cervical mucous of a cow which has been previously inseminated feels thick and sticky on the gun, it may be pregnant.



Make sure you do not pull back on the instrument, pulling back may result in much of the semen being deposited in the cervix and vagina.



Notes:

- Be gentle, don't use too much force.
- Take your time.
- Relax.
- After properly depositing, slowly pull the instrument from the reproductive tract, remove the gloved hand from the rectum.
- Check the instrument tip for signs of blood, infection or debris leakage inside the sheath.