



बिहार पशु विज्ञान
विश्वविद्यालय

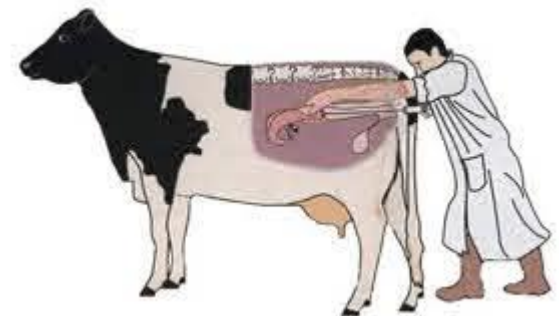
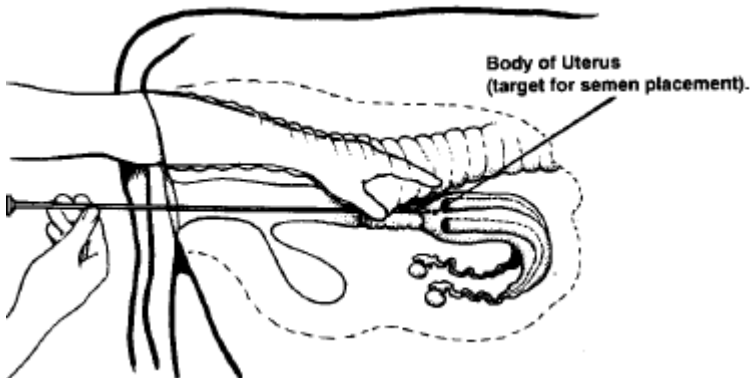
BIHAR ANIMAL SCIENCES
UNIVERSITY



Practice of Artificial Insemination

VCP : 411; Forth Professional Year (New & Old)

Dr Ankesh Kumar
Department of Veterinary Clinical complex, BVC, Patna



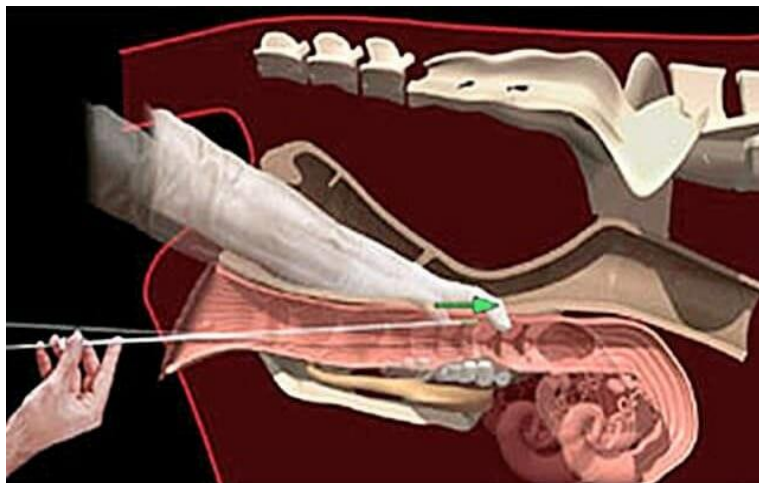
SIRE HAS MORE VALUE THAN THE COWS



General Conception of AI in Livestock

- ❑ The oestrous cycle length in primiparous cattle and Buffaloes is 18-19 days, while in pluriparous cattle and buffaloes is 21-23 days
- ❑ The duration of oestrus range from 8-24 hours and occasionally it may be 36 hours. For purpose of insemination the duration of oestrous has been divided into early, mid and late heat
- ❑ It is optimum to inseminate the animals in the 2nd half of mid heat and 1st half of late heat to obtain high pregnancy rate in cattle and buffaloes

- ❑ Animal in heat with the history of pre or post partum prolapse of cervix, eversion of uterus, abortion, retention of foetal membrane are advised sexual rest for two heat period.
- ❑ The clinical signs such as mounting on other animals/person is generally seen in early heat. So it is better to inseminate these animals 5 to 8 hours later. However. If the owner demands insemination in early heat, it is preferable to deposit the semen intracervical rather than intrauterine. Because the sperms deposited intra uterine get capacitated earlier than sperm deposited intracervical



- ❑ Mucus discharge /oestrus flow can be observed when an animal mount on another or at rectal examination.
- ❑ In early heat the mucus discharge flows as a string from vulva to the floor and breaks.in mid heat the mucus hangs from the vulva to hock and then break off, while in late heat the mucus string hang 25 to 30 cm long.
- ❑ The nature of discharge in early heat is clear, thin , copious and stringy. In mid heat the discharge is clear, less copious, medium stringy and moderately thick but the thickness of the string reduces hang up to hock and break
- ❑ But in late heat discharge is scanty or may be mild cloudy
- ❑ In buffaloes the characteristic of mucus is similar to cattle but the string is more thinner

- ❑ To get optimum conception rate inseminating the animals in late part of mid heat and early part of late heat is desirable
- ❑ All animals that comes to AI centre should be rested for 15 minute before examination or AI. High conception rate has been obtained in animals which were rested for 15 minute. This is because animal get excited while coming to AI centre due to dragging/ beating produced by vehicular traffic.
- ❑ Excitation causes release of adrenaline which interfere with the sperm transport
- ❑ Lion Reflex – Animal in oestrous only raises its tail to one side of the vulvar lips
- ❑ If animal is not in heat it tucks up the tail against vulval lips

- ❑ All animal must be ruled out pregnancy before going to Artificial Insemination
- ❑ The rumps and buttocks are examined for sticking of mucus, which may be moist or dry
- ❑ The dry healthy discharge looks glistering, if it is dull or light yellow it suggest uterine infection or heat passed off
- ❑ By gentle squeezing of the ventral vulval lips, the animal in heat bends and raises its back repeatedly, simultaneously contract the abdomen with raising the tail to one side of the vulval lips. This is called Clitoral Massage Reflex.
- ❑ if vulval mucosa is uniformly pink the animal is considered to be in mid heat

- ❑ The sacrosciatic ligaments are relaxed ($1/4$ to $1/2$ cm) during oestrus. If not relaxed the fertility is usually low. Excessive relaxation is seen in cystic ovaries, Chronic uterine infection or nearing parturition. Not much appreciated in buffaloes
- ❑ The uterine horn should be tonic and coiled, during oestrus, if not tonic the animal is not in heat. If uterus is atonic in the beginning, after the examination of each horn from the base to tips and Vice-versa if tonicity improve it is considered to be infected and AI is not advised

Thank You