

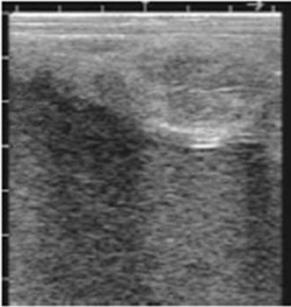
Mare Sexual Cycle

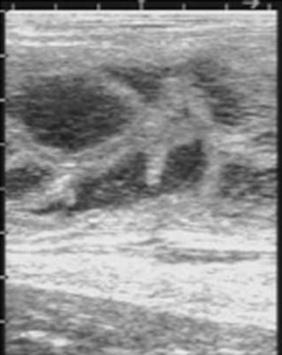
Anöstrus

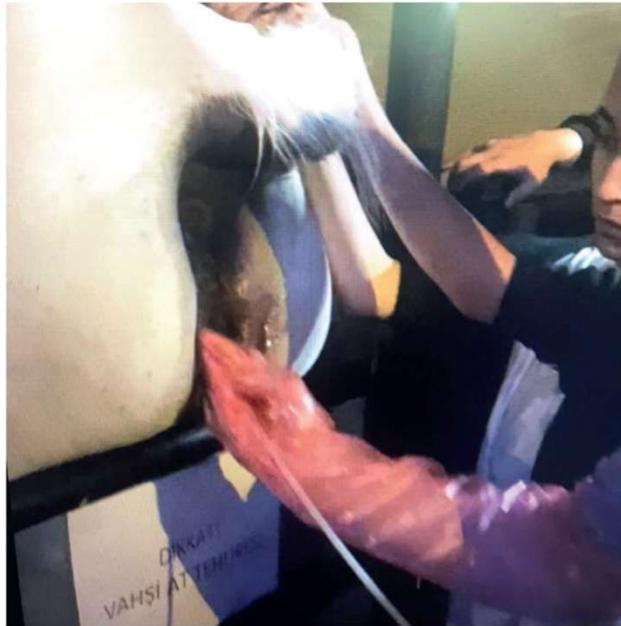
- Occurs in late autumn and winter period of the year
- Hypothalamus and pituitary are not functional
- LH secretion does not exist, while FSH can be observed in very low-level

Appropriate Insemination Time

Estrus	5-7 days
Ovulation time	1-2 days before end of estrus
Sperm fertile life	24-48 hours
Ovum fertile life	6-8 hours
Insemination time	<ul style="list-style-type: none">- 24-48 hours before expected ovulation- >3,5 cm follicle existence- Follicle reaches preovulatory diameter- For frozen semen, insemination should be done 12 hours before ovulation- and can be done until 6 hours after ovulation by specific techniques
Insemination technique	Vaginal Yöntem
Deposition	Corpus Uteri

Edema score	Edema amount	Description	Ultrasonographic image
0	None	No edema present; individual endometrial folds not discernible; homogenous echotexture typical of diestrus or anestrus	
1	Slight	Endometrial folds easily observed in a light 'spoke-wheel' pattern; edema may be more evident in uterine horns than uterine body. Typical of early estrus as dominant follicle is developing or late estrus prior to or at time of ovulation	

Edema score	Edema amount	Description	Ultrasonographic image
2	Moderate	Endometrial folds increased in thickness; edema pattern obvious throughout uterus. Typical of mid-estrus and usually represents the peak estrogen effect noted 1 to 2 days prior to ovulation	
3	Heavy	Large distended endometrial folds; exaggerated degree of edema; not typical of a normal mare in estrus. May be associated with uterine inflammation	



Artificial Insemination Strategies

Once in two days/Every other day

- Mares are inseminated 48 hours apart from the beginning to the end of estrus.
or;
- Mares are inseminated 48 hours apart from the 2-3rd day of estrus until the end.
- It is an insemination strategy often used in farms where follicle development and ovulation timing are not controlled.
- Aims only at offspring production. Increases labor, tires the stallion and reduces the advantages of artificial insemination.

Artificial Insemination Strategies

According to Follicle development

- Mares are inseminated 48 hours apart when the diameter of the dominant follicle reaches 35 mm.
- Inseminations are terminated by determining that ovulation has occurred.
- It requires daily ultrasonographic examination of the ovaries. It has the advantage of reducing the number of inseminations per ovulation.

Artificial Insemination Strategies

According to Follicle development + hCG

- Mares are inseminated when the diameter of the dominant follicle reaches 35 mm and receive an IV or IM injection of 3000 - 5000 IU hCG.
- hCG is administered to ensure ovulation of the dominant follicle within 48 hours. If ovarian controls at 48 hours after insemination show that ovulation has not occurred, only the insemination is repeated.
- It is advantageous to use in enterprises where semen is limited and stallion quota is high.

Insemination Dose

Standard insemination dose:

10-25 ml extended (0,2-100 ml)

250-500x10⁶ progressive motile ve morphologically normal spermatozoa (20-1000x10⁶)

***** 25-50x10⁶/ml concentration is accepted as gold standard**

At least 1:1 dilution should be made for fresh semen, 1:3, 1:5 for chilled semen.

Insemination Dose

Standard insemination dose:

4-8 frozen semen straw (0,5 ml)

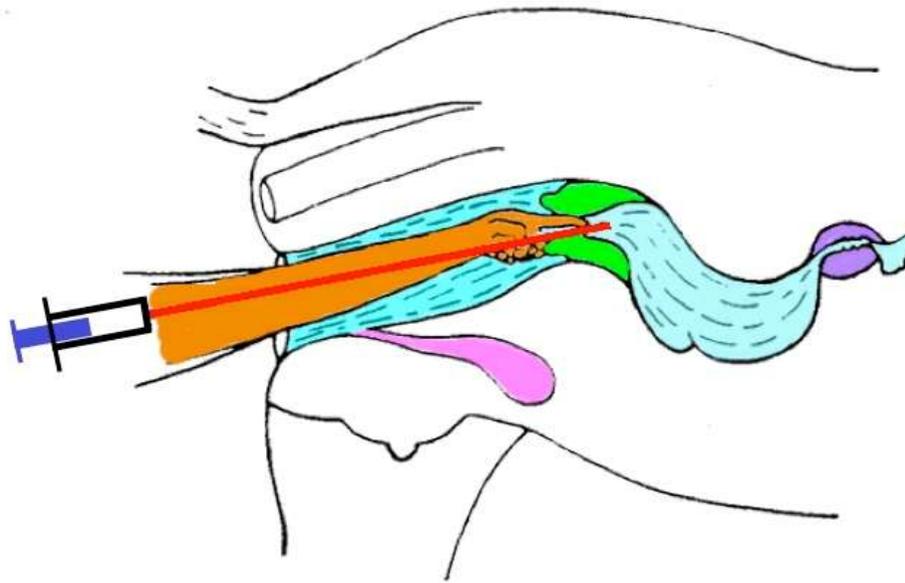
200x10⁶/ml (20-1600x10⁶/ml)

>%35 progressive motility

* **1-10x10⁶/ml** dosed frozen semen can be used for Deep cornual insemination

Artificial Insemination Technique

Artificial Insemination in the Mare



Vaginal



Pregnancy Examination

Rectal Palpation

- **15-24 days:** Uterus and horns are distended and tubular. No signs of the embryo are observed. The embryo is mobile in the uterus for the first 16 days, and fixation occurs around the 16th day.
- **24-28 days:** Distention of uterus and horns continue. Around the 26th day, a bulge 3-4 cm in diameter can be palpated in the ventral direction, close to the bifurcation, which develops due to embryonic structures. It is more prominent in maidens.
- **28-35 days:** Embryonic bulge is more prominent. The uterine wall on the side where the embryo is fixed is thinner.