**Maintenance of Pregnancy (Gestation**)

The maintenance of pregnancy in mammals is dependent on prevention of uterine contraction.

**A. Species with Progesterone from the CL:**

**Cattle:**

• One blastocyst is usually sufficient to signal maintenance of pregnancy.

• The CL and ovarian progesterone are essential for pregnancy maintenance through 215 days of the 280 day bovine gestation.

• After day 150 the placenta compare to produce progesterone to maintain pregnancy.

• Maintenance of the CL is likely dependent on pituitary LH.

**Horses:**

• The original corpus luteum is maintained through day 140.

• About day 35, cells of fetal trophoblast stimulate the endometrial cups of the uterus and by day 40 produce equine chorionic gonadotropin (eCG).

• The gonadotropic hormone stimulates follicular growth on the ovaries, occasional ovulation and considerable luteinization occurs by day 50 to form numerous accessory corpora lutea.

• The eCG levels remain high and accessory corpora lutea greatly elevate plasma progesterone through day 140.

• The accessory and original CL regress and pregnancy is maintained by low levels of progestin or some as yet unexplained mechanism.

**B. Species with Pregnancy Maintained by the Placenta**

**Sheep:**

• The CL and anterior pituitary LH needed to cause CL secretion of progesterone are essential for the first 55 days of ovine pregnancy.

• Thereafter the placenta produces sufficient progesterone for maintenance of pregnancy until the end of the 146 day gestation.

**Length of Gestation**

Length of gestation is calculated as the interval from the last fertile mating to parturition and its may be called gestation period .

The gestation length are varying between the species ,the following is the gestation period in some animals :

**Cattle 280 ± 5 days**

**sheep 148 ± 5 days**

**horses 338 ± 15 days**

**canine 60 ± 5 days**

**The length of gestation is influenced by:**

1. Genetic factors: the small variation in pregnancy duration among breeds within species may be due to genetic factors.

2. Fetal factors :

Fetal sex: Male calves and foals are carried 1 to 2 days longer than female.

Twinning: Twin calves are carried 3 to 6 days less than singles.

Life of the fetus: late fetal death or abnormalities of the pituitary or adrenal glands will extend gestation in cattle, sheep and swine.

3. Maternal factors:

The age of dam influence the duration of pregnancy with in species ex. Young heifers carry their calves for a slightly shorter period than older.

4. Environmental factors:

Season ; in seasonal animals like horse the foals conceived in summer have significantly shorter gestation period than those conceived at start of breeding season in early spring.

Nutrition :Well-fed mare have gestation period length about 4 days shorter than those on maintenance ration.