

Reproduction in buffalo

Anatomy of genital system: The reproductive organs of buffaloes are smaller, but quite similar to those of cows.

Puberty :

The buffalo attains puberty at a later age than cattle. under favorable conditions age at puberty occurs at 15–18 months in river buffalo and 21–24 months in swamp buffalo.

Seasonality:

Buffalo may be considered to be seasonally poly-estrus and a short day breeder. River buffalo: the female is active from July until the end of February. The peak of first mating occurs during autumn and winter.

Swamp buffalo: continuous cyclicity throughout the year, but a crop-associated seasonal pattern is observed.

Oestrus Cycle:

River buffaloes: 20-22 days

Swamp buffaloes: 19-20 days .

Estrus – on average 12 to 28 hours.

Ovulation occurs approximately 10 hours after the end of estrus.

Buffalo estrus behavior is less intense than that of cows and is consequently much more difficult to detect. The signs of estrus in buffalo are less overt than in cattle and homosexual behavior between females is rare.

Mucosal vaginal discharge, swollen vulva, mounting behavior (far less frequent than in cattle) and the standing reflex are the main signs of estrus (**Acceptance of the male** is the most reliable sign of estrus in the buffalo).

Pregnancy and post- partum period:

The gestation period of buffaloes is longer than that of cows and is approx. 310 to 330 days. The CL is maintained throughout gestation.

River buffaloes tend to have a shorter gestation period (315 days) than swamp buffaloes (330 days).

Reproduction in goat

Goats are important livestock animals throughout the world. This is in part related to their ability to survive on suboptimal forage in more arid environments, combined with their smaller size, shorter gestation period, and increased litter size, particularly when compared to bovine.

Puberty:

Goats reach puberty between six and 15 months of age, depending on breed and nutritional status and season.

Terms :

Doe = female goat

Buck = male goat

Kid = newborn goat

Kidding = parturition in goat

Type of reproduction = seasonal polyestrous

Type of ovulation = spontaneously

Seasonality:

In temperate climates, the [breeding season](#) commences as the day length shortens, and ends in early spring or before. In equatorial regions, goats are able to [breed](#) at any time of the year. Successful breeding in these regions depends more on available forage than on day length.

Estrus cycle:

Does of any breed or region come into [estrus](#) (heat) every 21 days for 36 to 48 hours.

Estrus symptoms are preceded by pro-oestrus. It is a period that lasts about 1 day when the buck closely follows the doe but she will not stand to be mounted. The only sure sign of oestrus is if the female will stand and allows the male to mount (the 'standing reflex'). Does actively seek the presence of the male when in oestrus. Signs of oestrus in does include tail wagging, bleating and urination near to the buck. There is also some swelling of the vulva and mucus discharge.

Time of ovulation:

The time from beginning of estrus to ovulation in goats is approximately 32 to 36 hours.

The buck may exhibit the flehmen reaction, flick his tongue and strike the doe with a forelimb and will urinate on his forelegs and face. Sebaceous scent glands at the base of the horns add to the male goat's odor, which is important to make him attractive to the female.

Gestation length is approximately 150 days.

The CL of pregnancy persists throughout gestation,

Twins are the usual result, with single and **triplet** births also common. Birthing, known as kidding.

Sheep reproduction

Ewes generally reach puberty at six to eight months of age, and rams generally at four to six.

Ewe = female sheep

Ram = male sheep

Lamb = newborn sheep

Lambing = parturition in sheep

Type of reproduction = seasonal polyestrous

Type of ovulation = spontaneously

Seasonality:

In temperate regions seasonality is regulated by the photoperiod, i.e., daylight length: shortening daylight stimulates sexual activity and lengthening daylight induces anoestrus in sheep (i.e., 'short day breeder').

The estrous cycle of the ewe is usually 16 to 17 days long, with estrus lasting approximately 30 to 36 hours. Estrus in the ewe is a less obvious event than in other ruminants. If a ram is present, ewes in estrus will seek him out and may display tail-wagging. The only sure sign of oestrus is the 'standing reflex', i.e., the female stands and allows the male to mount. In the absence of a ram or when only an inexperienced ram is present, oestrus can go undetected. Spontaneous ovulation occurs late in estrus.

Gestation :

Gestation length is approximately 147 days, with minor variations between breeds.

The first third of pregnancy is corpus luteum dependent but, after about the 50th day of pregnancy, progesterone is mostly produced by the placenta. Thus, ovariectomy or the administration of luteolytic doses of prostaglandin F₂ during the last two thirds of gestation do not terminate pregnancy in the ewe.