

## التكاثر في الجاموس REPRODUCTION IN THE BUFFALO

The buffalo species (*Bubalus bubalis*) can be divided into two sub-species, the riverain type and swamp (The marshes in Iraq) type. These are characterized by a diploid chromosome content of 50 and 48 respectively.



### Anatomy:

The reproductive organs of buffaloes are smaller, but quite similar to those of cows. The buffalo ovary is smaller than that of cattle and elongated, while the corpus luteum is also smaller and often deeply embedded in ovarian stroma.

### Puberty:

Age at puberty ranges from 16–22 to 36–40 months in various countries. Under field conditions, estrus first occurs at the age of 24–36 months.

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In well-fed animals, puberty may be reached before 20 months. Breed, season, climate, feeding systems, and growth rate significantly affect puberty. The average age at first calving lies, therefore between 3 and 4 years, but many buffalo cows do not calve until much later.

### Seasonality.

Buffalo may be considered to be **seasonally polyestrous 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.

### Estrus Cycle.

River buffaloes: 20-22 days

Swamp buffaloes: 19-20 days

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. Mucosal vaginal discharge, swollen vulva, mounting behavior (far less frequent than in cattle) and the standing reflex are the main signs of estrus.

### Pregnancy and post-partum period.

1. The gestation period of buffaloes is longer than that of cows and is approx. 310 to 330 days.
2. River tends to have a shorter gestation period (315 days) than swamp buffaloes (330 days).
3. The calving interval of buffaloes varies between 400 and 600 days, although longer calving intervals are no exception.

4. Seasonal, nutritional and managerial factors play an important role.
5. The first ovulation in river buffaloes does not generally occur before 55 days post-partum, but may be delayed up to day 90 post-partum when a suckling calf is present.
6. The first estrus is detected after 130 days post-partum in suckled buffaloes, but may be delayed much longer depending on nutritional and climate conditions.

