

## Repeat Breeding in Cattle: How to Reduce its Occurrence and Improve Farm Economics

**What it is:** When your cow fails to conceive from 3 or more consecutive services (either natural or AI) at regular interval of 18-22 days without showing any detectable abnormalities, it is considered as Repeat breeding (RB). RB is one of the major reproductive problems in dairy cattle involving economic loss to farmers.

### How it affects your farm:

- There is considerable wastage of your valuable time. It may take from few months to a year for recovery based on severity of the condition and remedial measures taken by you;
- This will involve higher monetary loss due to treatment, maintenance (including cost on hired labour) and feeding undertaken during the unproductive period;
- There is reduction in total lifetime milk yield of the cow;
- There is every possibility of transmission of the disease (if the cause is infective) to other healthy cows of the herd;

### What may cause repeat breeding:

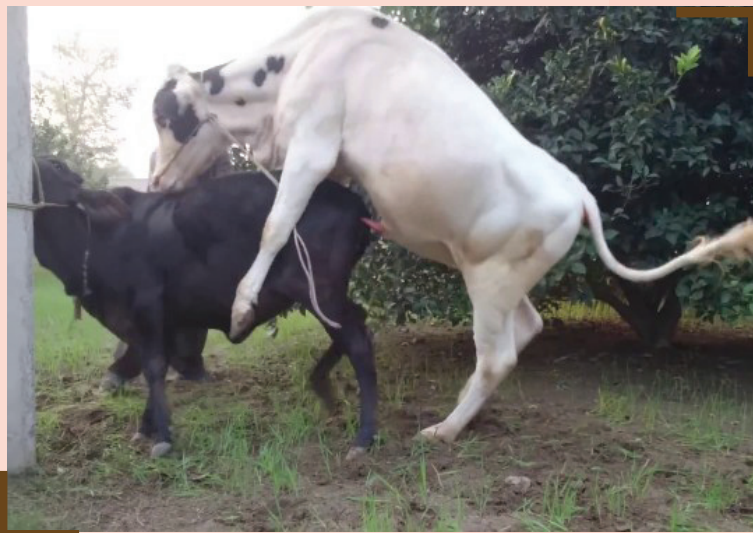
- **Sub nutrition/under nutrition** – if you do not provide concentrate feed with required proportion of different feed ingredients including mineral mixture and vitamins, it may lead to repeat breeding..
- **Defects of the genital tract/organs:**
  - Anovulatory heat- The heifer/cow shows all the external symptoms of heat but the ovary fails to release the egg (ovum);
  - Delayed ovulation-The ovary releases the egg (ovum) a bit late from the actual time, and therefore fertilization does not take place;
  - There may be formation of cysts/other anomalies in the ovaries;
  - In case of defects of the reproductive organs like blocked fallopian tubes in the cow/heifer may also cause repeat breeding.

- **Early embryonic death (within 16 days after A.I./service)**-Sometimes there may be death of the embryo in mother's womb within 16 days of AI/ natural service which may be due to factors like-too much of stress (transportation, summer stress, etc.), malnutrition, deficiency of pregnancy hormone, infection in the uterus, etc.
- **Age-** Older is the cow, higher the chances of repeat breeding. Fertility in dairy cows is better after the 1<sup>st</sup> or 2<sup>nd</sup> parturition till 4<sup>th</sup> or 5<sup>th</sup> and then gradually declines.
- **Uterine infection-** Your heifer/cow may be having some infections in the reproductive tract caused by pathogens like bacteria (e.g. Campylobacter spp.), fungus (e.g. Candida) or protozoa (e.g. Trichomonas). This adversely affects the normal uterine condition and leads to early embryonic death. It is one of the major causes of repeat breeding.
- **Faulty Artificial insemination (AI):**
  - If your heifer/cow is not inseminated in proper time of its heat period (12-18 hrs. from onset of heat), it may cause conception failure;
  - If the frozen semen is not properly stored and/or handled by the AI worker, the AI may not result in conception. There may be the case that cold chain is not maintained by containing insufficient level of Liquid Nitrogen or semen straw is improperly handled by the inseminator;
  - If AI instruments are contaminated, it will also cause conception failure.



*Artificial insemination on a cow*

- **Prolonged oestrus period:** In some cows, the oestrus period continues for more than the normal 24 hours and even up to 72 hrs.
- **Service by an infected breeding bull:** In the event of using natural services, if the bull is infected with sexually transmissible disease (STD) like- Trichomoniasis, Vibriosis, etc., it will transmit the disease to the heifer/cow during mating and will cause repeat breeding.



*Service by a breeding bull*

### **Measures to be adopted to reduce the occurrence of repeat breeding:**

- Maintain a proper plan of nutrition. Give the heifer/cow adequate quantity of good quality concentrate feed and green & dry forages according to their body weight, milk yield, stage of lactation, stage of pregnancy, etc.
- Prefer to go for AI for servicing the heifer/cow, and in case AI facility is either not available or unsatisfactory, to go for natural service with selection of a quality bull having satisfactory breeding record.
- Timing of oestrus and timing of AI/no. of AI required can be worked out by the attending vet/AI worker based on the proper information given by you. Hence, success of AI is determined by your keen observation and giving of proper information such as intimating about the first heat symptoms, prolonged oestrus period in the previous heat, etc. to the inseminator

## What you should do if repeat breeding occurs:

Dos	Don'ts
Consult with the local veterinary doctor if your cow/heifer fails to conceive on the 3 <sup>rd</sup> consecutive AI with no further delay	Avoid giving natural service to your heifer/cow using a healthy breeding bull if it is already repeat breeding. This will make the bull infected and every cow/heifer getting serviced by this bull will be ultimately infected with STD (Sexually transmissible disease).
Properly observe the cow/heifer during heat. A prolonged heat may create confusion to the attending inseminator and would lead to repeat breeding. So informing about the proper history to the attending inseminator is always helpful.	Although a bull looks apparently healthy never use it for services if it shows discharges from the penis or has the history of serving a repeat breeder cow/heifer.
	Never hide any information to the attending inseminator about its previous history of repeat breeding, conception failure, service by infected bull, etc. Many farmers think that on giving the true information, the cow/heifer would not be inseminated by him, rather a course of treatment would be prescribed which would make the conception further delayed and costlier.