

Success Story

Overcoming the Challenges of Repeat Breeding in Cattle and Buffalo in Maheshpur Block, District Pakur, Jharkhand

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This is the story of Maheshpur Block, Pakur, Jharkhand where Repeat breeding had become the bottleneck in the cattle and buffalo. We can remember that the days when the progressive farmers from Maheshpur Block were facing great loss due to repeat breeding problems in cattle and buffalo. Other day, some clients from Maheshpur Block approached me. I understood the pain of farmers; I managed myself to visit their livestock. After reaching there, I started my diagnosis and I got to know that almost whole region of Maheshpur was suffering with this problem of repeat breeding in their livestock. Therefore, I started my treatment in almost 20 progressive farmers' house who were in great loss.



Because, Cattle having healthy and serviceable reproductive tract failed to conceive even after three or four artificial inseminations. It was being resulted in financial crisis due to decrease in lactation yield, increased medical expenses, calving time, insemination cost and killing rate in cattle and buffalo in that region. The prevalence of repeat breeding was much greater in crossbred cows as compared to buffaloes and indigenous cows. In cattle, especially in cross bred cattle, many farmer's experienced this unwarranted and loss condition due to Repeat Breeding. In this condition there, cows were coming to heat regularly but they failed to conceive after successful mating. Holstein cross bred cattle were very commonly affected in Maheshpur region. Among them also, aged cattle at their 4th or 5th calving were very vulnerable. But

young cow at their 2nd and 3rd calving were not commonly reported for this problem. **Reasons for repeat breeding in Maheshpur, Pakur.**

- Cows which underwent abortion / retention of fetal membranes in the previous calving and treated for the same had acquired some infection in the uterine environment like metritis and endometritis. These were one of the reasons of repeat breeding.
- In many repeat breeder cows, mild and persistent infections in reproductive tract were commonly observed. Because of these mild degree infections, the internal conditions of uterus went unsuitable for conception and implantation.
- The animals had great scarcity of Vitamin A, E because these vitamins had a major role in fertility. Similarly, copper, manganese, cobalt and selenium also lacking in them that have very vital role in fertility.

Treatment

- For correction of clinical and subclinical endometritis, I used Ceftiofur Sodium @ 2.2 mg/kg. It has the added advantage of attaining Minimum Inhibitory Concentration (MIC) in uterus rapidly and furthermore it is effective against common uterine pathogens like *Escherichia coli*, *Trueperella pyogenes*, *Fusobacterium necrophorum* and *Prevotella melaninogenica*. In the post-partum uterine environment, these four-organism work in synergy to brought about metritis. Tetracyclines are irritants. Aminoglycosides and Sulphonamides do not work in the presence of purulent material. Many antibiotics are not permitted to be used as IU owing to long milk withdrawal period. Parenteral administration of antibiotics is advocated in the recent years after the awareness of antibiotic residues in milk. In Indian commercial market, Cephalosporins are available as intra-uterine medication. So, I used Ceftiofur sodium as a main antibiotic got successful results.
- For repeat breeding due to uterine infections, where functional CL (Corpus Luteum) was present, I used prostaglandins at 13 days apart. Usage of PGF₂ alpha as a prophylactic measure for metritis in post-partum situations was not advantageous. Combination of uterine lavage with PGF₂ alpha was preferred for treating endometritis with overwhelming advantage of zero-antibiotic residue and zero-withdrawal period. Oxytocin was also used but in limited circumstances.
- Dry matter intake is the single most influential factor for reproductive health so, I emphasized for this diet. Especially in transition period, all out efforts were to be made to maintain the energy balance positively. Negative energy balance could provoke a cascade of metabolic reaction led to Ketosis, Abomasal Displacement and fat deposition in liver. Ketosis and



Hypocalcemia were very important precipitating factors for post-partum uterine infections, ROP, dystocia etc. Recant trend of feeding anionic diet could prevent the occurrence of hypocalcemia but it should be accepted that anionic feed is not without risk.

➤ Anionic diets were not advisable for farm situations where Dietary Cation- Anion- difference (DCAD) was not practically calculated. Feeding monensin and rumen protected choline were proven prophylactic measures against ketosis, mastitis and later on indirectly on uterine health. Microminerals were beneficial. Micronutrients like Se, Zn, Cu, and Mn and vitamins A and D had been proved successful. For instance, supplementation of 3000 IU vitamin E/cow/day in late gestation prevented occurrence of uterine diseases. Similarly, Se was allowed to be incorporated in feed at the level of 0.3 ppm (mg/kg DM) only to harvest the good effects on fertility.

Conclusion

Based on correct diagnosis and timely treatment, I got success to rule out repeat breeding problems in Maheshpur Block, District Pakur. The farmers were very happy by my efforts regarding repeat breeding problems in their livestock and they started their livelihood in a better way. Some basic precautions I suggested to them like proper and timely deworming and vaccination. Now they are very vigilant and make themselves learn about the betterment of livestock.

