abortion and detect viruses a cow may be carrying.

Consult the local veterinarian

REPEAT BREEDERS

Cows that require three or more services before conception are classified as repeat breeders. Herds with sound reproduction aim for 40 – 45 percent of cows to be pregnant after first service, with 60 – 65 percent pregnant after two services. Cows classified as repeat breeders can impact the dairy operation financially through increasing semen bills and the additional days open.

Common diagnosis/identification:

When determining whether a cow is a repeat breeder, two items are available to help in the diagnosis. First, good heat detection can help determine if the cows are cycling normally but not getting pregnant. Second, good records are important for quick reference and review of herd performance throughout each year to determine a cow's reproductive behavior. Multiple factors can cause repeat breeders including high incidence of postpartum diseases, mastitis, lameness and excess handling of the reproductive tract. When addressing factors associated with repeat breeders a few things to keep in mind include:

- **Identify proper breeding time during estrus:** Careful observation of estrus can accomplish this and cows should be bred 12 hours after the initial observation.
- **Keep watch for uterine-related diseases:** Diseases like metritis, mastitis and retained placentas can also be a cause of cows not conceiving. Keep close track of these incidents on individual cows to identify potential reproductive challenges early.
- Check the quality of semen and skill of inseminator
- Infected bull should not be used for service.

Proactively handling of each reproductive challenge through good record keeping, proper consultation and sound management practices can help minimize its impact on productivity and increases profitability. Developing a plan of action to tackle the challenges of reproduction head-on can strengthen your ability to succeed and overcome the obstacles of each challenge.

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Published by
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2014

Diagnosis and Prevention of Common Reproductive Diseases in Mithun

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Reproductive problems are one of the major causes for infertility or sterility in bovines including Mithun. To get optimum productivity and regular calving, farmers must be aware of various reproductive problems, its preventive measures and health care management. Some of the important reproductive problems which often encounter in Mithun are as follows.

CYSTIC OVARIES

Cysts are the fluid filled structure protruding on the surface of ovary. It may be single or multiple in number. Cysts as large as one inch in diameter may be diagnosed in one or both ovaries. If cysts are present for more than 10 days, failing to release an egg, they can create a variety of additional fertility problems, including hormonal changes and changes in uterine environment.

Common diagnosis/identification of cystic ovary:

The most common way to identify a cow with cystic ovaries is through an abnormal pattern of estrus / heat. For example, a cow with an ovarian cyst may display constant estrus, no estrus or a combination of both. Additional indicators include excessive mucus discharge and severe milk production fluctuations. Cystic ovaries can develop for a number of different reasons. Several things to consider when dealing with chronic cystic ovaries include:

- **Calcium intake:** A frequent cause of cystic ovaries is excessive calcium intake, often when calcium intake is greater than two parts calcium to one part phosphorus.
- **Excess estrogen:** through treatments, fresh forages or feeds with high levels of mold toxins can cause ovarian cysts.
- **Genetic predisposition:** Cows known to produce daughters with cystic ovaries may be eliminated or bulls known to sire cystic daughters should be reevaluated within the breeding program.

Provide a clean environment and minimize stress: close to the time of calving. Cows should be housed in proper close-up dry cow conditions that provide limited exposure to negative environments.

Who to consult and what to ask: After analyzing the different indicators of cystic ovaries, it is recommended that you wait one month after parturition to diagnose cystic ovaries. Cows should be diagnosed by an experienced veterinarian. **ANESTRUS**

Anestrus is known as the failure of cows to show signs of heat and to ovulate. Because estrous detection tends to be poor in Mithun cows, failure to detect estrus must be ruled out first before classifying the cow as anovular.

Common diagnosis/identification of Anestrus: Since it is difficult to distinguish between missed estrus and anestrus, record monthly information including dates and any notes about uterine or ovary status. Since missed estrus is commonly mistaken as anestrus, detection can often be difficult. Use these tips to counter anestrus challenges:

- **Observe cows frequently:** Mithun cows should be monitored closely for estrus in a day for 20 minutes in the evening.
- **Check for anemia:** Unclotted blood samples can be taken from suspect cows and examined for iron, copper and selenium. If anemia is found, cows should then be checked for internal and external parasites.
- **Monitor uterine health disease:** Pay close attention to health events like retained placentas, metritis and mastitis that occur within the first 30 days after calving. This information will help you assess overall uterine health recovery postpartum, and identify cows that may have an extended anestrus period after parturition.
- **Monitor body condition score:** Cows with low body condition scores during the postpartum period can often be anestrus. To avoid this, monitor body condition scores if there is a trend in declining body condition.

Who to consult and what to ask: When anestrus is suspected as the reproductive challenge, it's first important to rule out poor estrous detection as the problem. You may contact the local veterinarian to solve the problem.

ABORTIONS

Abortions include the loss of a developing embryo or pregnancy. Abortion has both reproductive and financial implications. The reproductive health of the animal is affecting the conception which gets delayed.

Common diagnosis/identification of Abortions:

Before diagnosis of abortion can be made, pregnancy must be confirmed. Abortions occurring mid to late term can often be recognized by vaginal discharge or, in late term, retained placenta is also common. Many factors contributing to abortions including genetic defects, multiple births, injuries, infections and toxicities, it is important to identify and avoid new abortions. Specifically, investigate a few key areas to prevent abortions:

- **Avoid injuries** by providing the non slippery surface, avoid keeping the animal in group especially in late gestation and prevent the cow from diseases.
- **Use extreme care when dealing with the reproductive tract:** Avoid per-rectal examination of pregnancy before 45 days after breeding. If for any reason you need to insert hand for checking the reproductive tract of a pregnant cow, it is important not to injure the uterus or disrupt the developing foetus.
- **Determine the cause of abortion:** When abortion does occur, multiple diagnostic tests should be used to evaluate the cause. The aborted fetus, placenta and blood from the aborting cow should all be analyzed to determine the cause of