

Certain ovarian disorders are common in dairy cattle and can cause decreased reproductive results.

Check whether ovarian cysts can be a problem	Yes	No
I have very few cows with irregular heat intervals.		
My cows do not experience extended heat that requires multiple inseminations during one cycle.		
I never see cows with persistent heat behavior.		
Very few cows in my herd are not seen cycling until 60 days post calving.		
I very rarely see cows that stop cycling after the appearance of their first heat post partum.		
The incidence of ketosis and rumen acidosis is below 5% in my fresh cows.		
I have less than 10% cows with body condition score >3 at calving.		
I always monitor the BHBA concentrations in post partum dairy cows.		
I do not observe many animals with the BHBA levels > 1400mcmol/l.		
I regularly evaluate the feedstuffs used for the presence of mycotoxins		

Although pharmacological treatments are available, it is crucial to recognize that most cases are directly associated with negative energy balance and metabolic disorders typical for high producing dairy cows.

To address these conditions at the herd level the first step is to make adequate adjustments to your transition cow management.

If the majority of your answers are negative, it is probable that delayed ovulation and ovulation failure leading to the formation of ovarian cysts is a problem in your dairy cows. The next page will give you some basic information about these conditions and their management.

Delayed Ovulation

Ovulation normally takes place around 30 hours after the onset of heat behavior and in fact after the cow stopped showing the heat signs.

Why does delayed ovulation happen?

Delayed ovulation is common in high producing dairy cows and caused by inadequate hormonal stimulation of ovulation due to the negative energy balance. It is also one of the consequences of heat stress.

How does the delayed ovulation affect fertility?

- With the insemination scheduled on the morning-evening basis, the time span between the service and ovulation is much longer if the ovulation is delayed leading to aging of sperm and a lower fertilization rate.
- Delayed ovulation means also that the egg cell is aged when ovulated and has lower developmental potential which may lead to fertilization failure or embryonic mortality.

How can this condition be prevented?

The first step should be to correct the transition management and feeding to ensure good energy supply to high producing cows.

Administration of GnRH at breeding/AI induces ovulation within 24h of treatment and prevents its delay. This strategy can be adopted when increased duration of heat is observed in repeat breeders and during the periods of high ambient temperature.

Link to Vet resources

Address: <http://www.partners-in-reproduction.com/reproduction-cattle/prevention-delayed-ovulation.asp>

References:

Wiltbank et al. Theriogenology 2002;57:21-52 Bloch et al., J Dairy Sci 2006;89:4694-4702; Morgan & Lean, Aus Vet J 1993;70:205-209; Kaim et al., J Dairy Sci 2003;86:2012-2021

Ovarian Cysts

If the ovulation fails and the dominant follicle continues growing, an ovarian cyst is formed. It persists on the ovary in the absence of other structures and can reach substantial size.

Clinical symptoms

The clinical picture associated with the presence of ovarian cysts depends on their character and activity. Some cysts continue secreting estrogens which results in cows showing persistent heat behavior. The majority of ovarian cysts however are associated with lack of cyclicity (anoestrus) which accompanies cysts that are hormonally inactive or secrete progesterone (luteal cysts).

Why are the cysts formed?

Ovarian cysts develop when the hormonal stimulation of ovulation is inadequate. Negative energy balance, vitamin and mineral deficiencies as well as metabolic disorders such as ketosis and rumen acidosis contribute to the occurrence of the condition.

How can this condition be prevented?

The first step should be to correct the transition management and feeding to ensure good energy supply to high producing cows. Monitoring and treatment of metabolic diseases are also crucial.

Treatment of the ovarian cysts depends on the type of the cyst identified. Your veterinarian will be able to determine the type of cyst through clinical examination of the affected cows and treat them individually.

At the herd level, the use of estrus synchronization programs such as the Ovsynch protocol is often recommended as they induce ovulation and thus prevent the cyst formation.

Link to Vet resources

Address: <http://www.partners-in-reproduction.com/reproduction-cattle/treatment-cod.asp>

References:

Wiltbank et al. Theriogenology 2002;57:21-52; Vanholder et al., Reprod Nutr Dev 2006;46:105-119; Bartolome et al., JAVMA 2005;227:1409-1414