

Retained foetal membranes



What is RFM?

Retention of the foetal membranes (RFM) is a common occurrence in periparturient cows (the time immediately around calving). Also known as Retained Placenta (RP), it occurs when the foetal membranes are not expelled and remain attached to the uterus. The main sign is the visible presence of membranes hanging from the vulva for a prolonged time after calving.

There isn't an agreed definition of placental retention. Typically, it is accepted that we can talk of retention when the placenta has not been expelled after 12–24 hours postpartum. However, some definitions have placed it at 8 hours, while others up to 48 hours.

The incidence of placental retention is reported between 5% and 8%. However, despite its frequency, the underlying causes are not fully understood. It is accepted that immune function, hormonal, metabolic and physical factors all contribute to its occurrence.

An elevated risk of RFM has been associated with:

- Dystocia
- C-section
- Abortion
- Stillbirth
- Twinning
- Hypocalcaemia

- NEB (Negative Energy Balance)
- Micronutrient/trace element deficiency

Impacts of RFM

RFM has a significant impact on dairy cow productivity and fertility and health.

Development of RFM is a risk factor for:

- Metritis and endometritis, contributing to the known knock-on effects on fertility (conception interval extension, reduction in conception rate and delay to first service)
- Mastitis, ketosis and abomasal displacement

The impact on milk yield is variable.

Costs are difficult to quantify because little information exists on actual incidence, treatment rates and methods of treatment. These will predominantly be due to milk withdrawal due to treatment, reduction in yield and treatment costs, which are highly variable, due to different protocols and whether veterinary intervention is involved. These costs have been estimated to be £108* but this will vary enormously from farm to farm.

Costs resulting from increased risk of subsequent uterine disease, other periparturient diseases, extended calving interval, reduced pregnancy rates and increased risk of culling have been estimated to be £215*.

* Source: Cooper, R. L. (2014) Retained foetal membranes in cattle: the knowns and unknowns. *Cattle Practice* 22: 17–25.

Preventative strategies

Herd strategy

Breeding programme focused on calving ease, minimising the likelihood of intervention and/or the need for a C-section

- Use of beef bulls with EBVs that focus on birth weight, gestation length and direct calving ease

Abortion

- Management of major endemic disease: Neospora, IBR, Leptospirosis, BVD
- Lesser known causes: Aspergillus, Bacillus and Listeria associated with poor feed management

Stillbirth

- Management of the abortive agents
- Management of hypocalcaemia
- Reduction of physiological and psychological stresses at calving
 - Group changes
 - Movements
- Management of micronutrients status
 - Iodine, selenium and vitamin E

Twinning

- Genetic selection may be possible against familial lines predisposed to twinning

NEB

- Effective control will minimise the inevitable reduction of immune function during this period
 - BCS management
 - Effective nutritional management plan
 - Optimised infrastructure
 - Monitor NEFAs (non-estrified fatty acids) and BHBs (beta - hydroxybutyrate) pre- and post-calving

Hypocalcaemia

- Manipulation of DCAB
- Calcium binding

Individual strategy

- Appropriate supervision at calving
- Appropriate equipment for calving
- Intervention only when necessary and at an appropriate time (relevant for calving and RFM incidences)
- Clear treatment protocol

Treatment options

Manual removal is common practice but there exists little evidence to support it. Even very cautious removal of RFM is likely to cause trauma to the lining of the uterus, with possible bleeding and bruising. This may allow for bacterial spreading and reduce the immune response needed to achieve clearance of infection.

For sick cows, there are several medical treatments available (antibiotics, NSAIDs, hormones). Speak to your veterinarian about the best option.

Herd health planning

- Record and regularly monitor the incidence of RFM
- Target <5%
- Ensure all staff are aware of best practice approaches to treatment, previously agreed with a veterinary surgeon



Figure 1. Retained foetal membranes

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