

Published in 'British Dairying' Magazine in November, 2017

MANAGING COLOSTRUM

Stepping up colostrum management

Simplifying and speeding up the job of thawing colostrum has resulted in improved consistency, reduced calf mortality and improved immunity on one Powys dairy farm.

Hassle factor can all too easily be used as an excuse not to do a job, so anything that simplifies an essential task such as colostrum feeding is only going to benefit staff and calves alike.

Powys dairy farmer, Fraser Jones has seen this first hand in his dairy business near Welshpool in Powys. Since introducing a new specialist colostrum thawing system to Wernllwyd Farm, he has witnessed marked improvements in calf mortality and immunity.

Wernllwyd Farm is a dedicated dry cow and youngstock facility, which takes stock from two of Calcourt Farms' three dairy herds, which total 1,000 cows. The importance of feeding plenty of quality colostrum within two hours of birth has never been lost on the four strong team at Wernllwyd. However with a total of 950 animals on the unit, time is pressured.

Up until this year, all colostrum had been tested using a colostrometer, pasteurised and



Dairy producer Fraser Jones and vet Oli Hodgkinson.

then frozen in old, four litre milk cartons. As soon as a cow began to calve, the carton would then be placed in a couple of make-shift coffee urns to defrost. Each were heated to 40°C, but could only hold one bottle, which tended to float to the top so it was not fully submerged. This—coupled with the thickness of the bottle—meant it would often take six hours to fully defrost.

Mr Jones recalls: "It meant calves weren't getting what they needed. We were trying to feed within one hour and we just couldn't.

It was a nightmare. Some calves would also be missed entirely."

Mr Jones is all too aware of the need to provide plenty of good colostrum. For example, research shows that calves which have four litres of colostrum immediately after birth instead of two, will produce more milk as adults. Providing calves with more colostrum will also lead to better growth rates, while calves will also have fewer calf hood diseases thanks to absorption of immunoglobulins.

He notes: "Colostrum is 100% important. Without it calf health and performance will suffer. That's why we test everything. If it's not up to quality, we discard it and we keep the best we can so we know they're getting the best."

As a result, in January this year, he looked at various alterna-

tive thawing options and spoke to farmers for recommendations. Consequently he invested in a Store & Thaw system from Pyon Products.

The water bath system can be heated to varying temperatures, with 40C generally use for defrosting colostrum as it avoids damaging the immunoglobulins and is also the ideal temperature for feeding. The heater has a stirrer attached which agitates the water to help speed up thawing. The system can also be used for pasteurising, although the team at Wernllwyd use a dedicated



Calf protocols are seen as a must to optimise health and performance.



The frozen colostrum takes about half an hour to thaw which means calves are guaranteed their first feed within two hours.

pasteuriser milk trolley.

A bag of frozen colostrum is placed in one of two metal baskets, which are fully submerged in the water bath. The system's colostrum bags are flat when filled, which provides a large surface area to volume ratio meaning it takes less than half an hour to thaw. They are then decanted into a milk feeder bottle for feeding to calf.

Mr Jones says: "Store & Thaw does the job and it's relatively cost effective. There are more glamorous, bells and whistles systems, but they're five times the cost. It's the ease of it. As soon as it's a hassle, people lose interest. The Polish guys like to do the same every day. It's repetitive, it's very simple and there's nothing that can go wrong. The simplicity of it is what I like."

As a result, the first feed is now guaranteed within two hours of birth and calves are no longer being missed. Mr Jones is certain this is the case thanks to improved blood immunoglobulin levels, which shows calves are absorbing adequate amounts from colostrum.

The farm's vet, Oli Hodgkin-



All calves are tube fed colostrum within two hours of birth.

son from Trefaldwyn Vets explains: "We want blood ZST results (a measure of immunoglobulins) to be over 20. The lowest in March 2015 were nine with some under five and some at 60. We've since changed the type of test to monitor blood total proteins which is also a measure of immunoglobulins. We want this to be over 5.5 and now we have more samples that are a

pass. The consistency with Store & Thaw means blood proteins are more consistent."

Mr Jones believes this consistency is what is ultimately aiding calf survival. "The problem was poor consistency before. Some calves were being missed so she

was likely the one that ended up dying or something else," he says.

Both Mr Hodgkinson and Mr Jones believe calf mortality has dropped substantially—something which Mr Hodgkinson has noted at TB testing.

"We're starting to see more runs of calves without gaps when we're putting the ear tag numbers into the system at TB recording. That's a good indicator to me that things are good," he comments.

The fact calves are healthier has also been partly to thank for a 32% reduction in total antibiotic use across the whole farm business over the last 12 months. A more in-depth BVD control strategy has also played a key part in improving calf health, together with the farm's strict protocols.

"The hope is that improved colostrum management, together with a continued drive to improve management will lead to better performing bulling heifers and performance in the milking herd.

Fresh cow and newborn calf protocol

The team at Wernllwyd Farm are on hand 24 hours a day to care for calving cows and newborn calves. A night rota ensures cows are checked four times a night; 10pm, 12pm, 2am and 4am.

The farm's exact John's status is unknown due to the fact all herds are under a 60 day TB testing regime and there is a cross reaction with John's and TB. As a result, the herd is treated as high risk. This means hygiene at calving is paramount, all colostrum and milk is pasteurised and calves are removed from the dam as soon as possible.

The team adhere to the following protocols at calving, with heifers and bull calves treated the same:

- Cows calve in a loose straw yard.
- Cows are given warm water, feed and calcium bolus within one hour of calving.
- Calves are removed within one hour of calving.
- Cows are milked through mobile milking system in handling facility at next dedicated milking (maximum 12 hours later).
- Colostrum tested using a colostrometer—only good quality colostrum is frozen (green on the colostrometer).
- Four litres of colostrum are decanted into Store & Thaw five litre bags using a special stand and funnel.
- Bags are pasteurised at 60°C for one hour in a pasteuriser milk trolley.
- Bags are transferred to a chest freezer until required (flat bags allow stacking).
- Bag taken out of freezer when calf's feet are seen in calving cow and put in the Store & Thaw water bath which is heated to 40°C. On average it takes half an hour to defrost.
- Calf is removed from dam within two hours of birth and moved to individual calf hutch.
- Calf is tube fed defrosted colostrum within two hours and naval dipped.
- Second colostrum feed is given within first 12 hours via teat on bucket (or tubed if won't suck).

Fresh calved cows remain at the site for one week before going back to their dedicated milking unit. During this time they are milked through the makeshift parlour using the mobile units. This provides the opportunity to check fresh cow health. This milk is pasteurised and fed to calves at three litres twice a day until weaning.

STORE & THAW

COLOSTRUM MANAGEMENT SYSTEM BY PYON



FIRST FEED GUARANTEED!

Complete kit to test
pasteurise, store, freeze
& safely re-heat colostrum

call: 01432 830409 www.pyonproducts.com