

dairying

Cleanliness key to calfcare

It's vital that the utensils and containers used to feed colostrum are free of contamination

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Picture the scene, you enter a restaurant (COVID-19 restrictions allowing...) sit comfortably and order your favourite dish from the menu. The staff of the restaurant start to prepare the table for your meal and suddenly you realise that cutlery and glasses are far from sparkling. There's a layer of scum on everything.

What do you do? Make up some excuse and get up and leave or take a chance and eat what you ordered anyway and hope that it won't end badly?

Now, imagine you are a newborn calf. Assuming the colostrum is good enough to be fed, how is it going to be delivered? The majority of the farms in a 2017 study by John Barry, Teagasc Moorepark (see page 7) were fed with a bottle and teat, a bucket and teat or stomach-tubed. But what were the hygiene practices related to these feeding utensils?

The study carried out swab sampling of feeding utensils and found that the cleanliness of calf feeding equipment could have definitely been improved, particularly during the second half of the calving season when people start to take the foot off the pedal following the very busy first six-week period.

Other studies have found that poor hygiene practices for feeding equipment can result in bacterial contamination of colostrum, and numerous

studies have reported a negative association between colostrum bacterial content and the transfer of immunity to the newborn calf.

The 2017 study found that stomach tubes and the bottles and teats being used to feed colostrum were among some of the dirtiest equipment on the farm. This means that all the effort of trying to deliver on the colostrum 1-2-3 protocol was possibly being undone by poor hygiene.

Improved levels of hygiene around feeding equipment can reduce the risk of bacterial contamination of colostrum, and further increase the rate of passive immunity achieved on commercial dairy farms which would subsequently improve calf health and reduce the workload associated with sick calves.

Therefore, it is clear that all feeding equipment must be kept clean. It should, at a minimum, be rinsed after every feeding period and should be fully washed and disinfected with hot water and detergent regularly. This should be done at least once a week and preferably more often. Bottles and stomach tubes being used to give the first feed of colostrum should be cleaned after every use.

Good cleaning practices will prevent the buildup of milk scum (a biofilm) which will contaminate the fresh milk or milk replacer every time it is being fed. Essentially, this scum is "feeding" harmful bacteria directly into the stomach of the calf. Eliminating this can only be a positive for calf health on your farm.

How to wash calf feeding utensils

- Rinse (be careful not to use water that is too hot for the first rinse).
- Soak in hot water (55°C) and use a liquid detergent.
- Scrub.
- Wash with 50°C water.
- Rinse (consider including a sanitiser).
- Leave to dry.

Clearly, you need significant volumes of hot water to follow the



protocol. Therefore, if you are currently short of hot water, you need to do something about this in advance of calving 2021.

A procedure should be put in place for washing calf feeding equipment and this should be clearly described and visible, perhaps on laminated sheets on notice boards or walls, so that whoever is washing the utensils can see exactly what is expected.

While this is another job on top of an ever growing list of jobs during the very busy calving season, it has the potential to save you time in the long run, time that you will have no choice about as sick calves will have to be treated.

Calfcare events

Normally, there would a significant number of Calfcare events throughout the country in conjunction with Animal Health Ireland. However, like so many other events, this is moving online for 2021 due to the ongoing COVID-19 issue.

Calfcare Virtual Week will run from 18 to 21 January and will cover all aspects of calfcare from being prepared in advance right through to weaning. If you want to see what is happening during Calfcare virtual week go to www.teagasc.ie/news-events/national-events/events/calfcare-calvingseason.php



Calf feeding hygiene

Unlike in humans where placental transfer occurs, conveying immunity to a newborn baby, calves are born completely naïve and are very vulnerable to infection. They must get their protection against infection from colostrum.

So, when a newborn calf hits the ground, a race begins between bacteria in the calving environment and colostrum. These are in direct competition with one another for the absorption sites along the lining of the calf's stomach. The 1-2-3 rule of colostrum management was developed to try to ensure that colostrum wins the race to fill all the absorption sites along the intestinal lining and therefore preventing bacteria from getting into the bloodstream. If bacteria win this race, the potential for illness in the calf increases significantly.

A study by conducted by John Barry in 2017 examined practices at calving such as timing of colostrum feeding, colostrum quality and feeding equipment cleaning practices among other aspects on 47 commercial dairy farms across the country.

The study found that colostrum quality in Irish dairy herds is generally good. However, significant variation exists. This variation and the issues associated with it could be overcome by assessing colostrum quality, a practice currently conducted on only approximately 15% of Irish dairy farms.

This involves the purchase of a relatively cheap refractometer (€25 to €30) which can be used to assess colostrum quality on farm and allow for informed decisions around whether or not the colostrum being tested is appropriate for that ever so crucial first feed.

Colostrum 1 – 2 – 3 for dairy calves

1 Use colostrum from the first milking for the first feed

2 Give colostrum within two hours from the calf's birth

3 Give at least three litres

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