

Combating clinical mastitis in Africa

I WAS always told that you need to experience the rainy season in Southern Africa to appreciate the volume of water that can drop out of the sky.

Three inches of rain in one hour is like someone turning on a really powerful power shower. Immediately afterwards the sun comes out and everything returns to normal.

I work with a group of farmers in Zimbabwe, helping them with mastitis

and milk quality issues and other aspects of preventive medicine and fertility. Milk price is the same as in the UK and cell count penalties are just as severe.

It is unusual for any cows to be housed as the rainy season arrives in November and ends in March. This is the time that conditions at pasture or in paddocks become extremely challenging.

The level of clinical mastitis can increase tenfold and at the end of the rainy season herd cell count might have increased to levels of 400 to 600.

Mud baths

Many of the larger intensive herds keep their cows in paddocks which can become like mud baths! It has to be seen to be believed, and my last trip coincided with the end of the rainy season.

All mastitis bacteria enter through the teat canal which is 6 to 10mm long. It is the primary defence mechanism to



Cows love submerging their udder and teats.

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PETER EDMONDSON reports on his work in Zimbabwe to help farmers with mastitis and milk quality issues as well as other important aspects of preventive medicine and fertility



maintain a semi-sterile udder and keep bacteria out.

It has to open as wide as possible during milking for a fast milk out and we know that high-yielding cows have more open teats with faster flow rates. Some of the cows in Zimbabwe are giving on 8,000 to 10,000 litres and so the risk factors are high.

Any damage to the teat canal will allow bacteria easier access to the udder. When the teat canal closes it is like a series of inter-digitating folds that try to stop anything entering. It is amazingly efficient.

However, when you encounter overwhelming challenge of infection like when cows are semi-submerged in mud and manure, then these defence mechanisms can fail. Cows love submerging themselves as it is cool and also very comfortable. They do not think about the implications for mastitis or anything else.

Many of these environmental bacteria will enter the udder. The cow will respond by pushing in millions of somatic cells to try and eliminate these bacteria. This results in a significant increase in cell count in individual cows and herd cell count.

Miracle of nature

This cell count then subsides within 4 to 6 weeks after the end of the rainy season. This really is a miracle of nature as it shows just how effective the udder immune system is at stopping even more cases of clinical mastitis occurring.

One of the most difficult challenges is faced by the milkers. These cows can enter the parlour in horrendous condition. The milker's job is to ensure that teats are clean and dry before milking.

Many of the parlours are tired and in need of upgrade or replacing. Some have poor vacuum stability, poor pulsation and most do not have automatic cluster removers. Unfortunately, as Zimbabwe went through hyperinflation which ended in 2008, money is nothing like as available or as easy to access as in the Western world.

This means that milking can be slow and in the dry season a shift might last 4 to 6 hours. Once milkers are challenged with really dirty udders and

teats, you can add a further two hours on to milking.

The difficulty is that nobody can focus on carrying out a good job for this length of time and so the animals that are milked first will be cleaned quite well, but those that come in towards the end are likely to be less well-prepared.

All of these factors add to the risk of clinical mastitis occurring. Muck and manure challenging the teats and teat ends increases the risk of clinical mastitis.

Many of our dairy clients have made significant improvements to the environment where their cows are housed. One of our herds put in a new 400-cow cubicle shed bedded on sand and he has reduced mastitis levels to between three and four cases per month, equivalent to a mastitis rate of 15 cases per hundred cows per year.

Incredibly clean

There are other herds running at similar levels, and it is easy to see why this is occurring as the udder and teats are incredibly clean. Unfortunately, there are still many herds where the environmental conditions are very poor. In some of these cases the mastitis rate can be as high as 100 cases per hundred cows per year.

This is pretty soul-destroying for the milker, creates a welfare issue for the cow and, of course, costs the farmer a significant amount of money in treatment and lost milk.

The aim has to be to keep cows in the cleanest possible conditions to minimise the risk of clinical mastitis. My farmers in Africa are now looking at ways that they can provide these conditions for cows for the up-coming rainy season this November.



The teat canal contains inter digitating folds to help stop bacteria entering the udder.

They now understand why the problem is occurring and what action needs to be taken. While their conditions are extreme, it just highlights the importance of keeping teats clean all year round to minimise clinical mastitis.

• Peter Edmondson runs the Mastitis Control and Quality Milk Production Seminar with Roger Blowey which will be held from 9th to 11th November in Gloucester. Visit www.sheptonvet.com for further information.



Dirty udders and teats add time to milking; below: clean udder and teats will result in less clinical mastitis.



Large herd seminar this month in Gloucestershire

THE 9th Large Herd Seminar takes place from 24th to 26th June at the Tortworth Court Four Pillars Hotel, Wootton-under-edge, Gloucestershire.

There will be lectures – with speakers from Europe, the US and the UK – workshops and on-farm demonstrations on the theme *Total dairy*, looking at five aspects of managing the modern dairy herd: the cow, the calf, the feed, the feet and the people. The format is intended, the organisers state, to combine the theory with the practical, directly applicable back on farms, and is inclusive of all aspects of dairy farming both in the UK and Europe.

The programme starts at 2pm on Tuesday, finishing at 1pm on Thursday. Full details are on www.largeherds.com.