

Improving fertility and reproduction

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Good conception rates are very important in the dairy herd and many farmers think that just because they may have a conception rate of 40 or 50%, they have good reproductive performance.

However, if you have 100 cows and only end up serving 20, then no matter how good your conception rates are, you will not get many cows back in calf.

The key to successful reproduction is to get cows into a healthy state so they are clean and cycling after calving, catch them bulling and then have a successful service. In this article I want to focus on getting cows clean after calving and heat detection. So, how can this be achieved in practice?

Post calving check

Let's start with the calved cow. Our key is to ensure that she is clean post calving and if there are problems let's identify these and tackle them early. I used to work in Saudi Arabia with large dairy herds and a postnatal check was carried out on every cow about 10 days after calving.

In our practice some farmers present all cows for a post calving check while others will present cows which have had a difficult calving, twins, milk fever or retained foetal membranes. If you treat early you will maximise your success.

There is nothing more difficult than trying to remove chronic udder infections. By now we assume that the cow is clean and she should start cycling provided the diet and management is correct.

Years ago when cows came bulling they were easy to spot. Cows gave less milk, were under far less production stress and were in smaller herds. This has all changed due to market pressures, low milk prices and much larger dairy herds.

High yielding cows may only be mounted three or four times when bulling and this makes the challenges of catching cows far more difficult. So how can we improve this?

Make sure that all your cows have a clear freeze brand or identification. Involve all farm staff in heat detection to maximise observations. This includes tractor drivers as well as stockmen. Training all staff in heat

detection is very beneficial so everyone knows what to look out for. Use a notebook to record this information and do not rely on your memory, it is easy to forget or to give the wrong cow number.

You need good communication between staff so that this information is transferred at the correct time. There is no point a tractor driver telling the stockman that a cow was bulling two days ago. We recommend that all heats are recorded, even if they occur a

few weeks after calving. A bulling cow is a cow that is cycling and is a very healthy sign. We can use this information to predict when cows will come bulling again.

We cannot be with cows 24 hours a day and so we will miss heats. Bulling activity is intermittent and so a longer observation period increases detection.

Cows do not show signs when other activities are going on such as milking or feeding.

Continued on page 22

APPLICATION OF A TYPICAL HEAT DETECTION AID SUCH AS ESTROTECT

1. Brush



4. Press down firmly



2. Keep warm



5. Ready



3. Apply



6. Activated



Continued from page 21
Up to 70% of heats occur at between 6pm and 6am, when staff are away.

Half of cows show signs for six to 12 hours but a quarter are bulling for less than six hours.

Heat detection aids

The average heat detection rate in the UK is about 35%, so if we have 100 cows which are cycling, then we are only picking up one third of these. Heat detection aids will help improve this and there are a variety of products on the market.

You can use tail chalks or paint, Kamar

type products where a red dye is released once a cow is mounted or the new Estroject scratch cards. All heat detection aids have their advantages and disadvantages. I want a device that stays on the cow, and does not fall off.

I like colours that can be easily seen, it is amazing how many people are colour blind and so a choice of colours is a real advantage.

Heat detection aids should be used on all cows which have not been served by a certain number of days after calving, and this will depend on the calving pattern and individual herd-breeding plan.

They should also be used to identify cows which may return to service, and so they

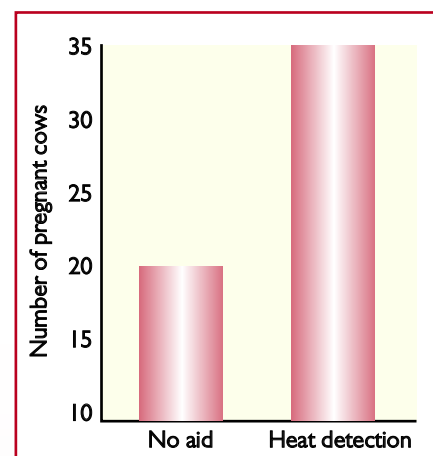


Fig. 1. Number of pregnant cows in a three week period in a 100 cow herd with a 50% conception rate, when comparing 40 and 70% heat detection rates.

should be applied about two weeks after insemination. We also use aids on all cows which have had any veterinary treatments to bring them bulling.

We have some herds which use pedometers to measure activity. This rises when cows are bulling and so is another aid. We also have vasectomised bulls with chin ball markers so that they pick up cows in heat.

It is not advisable to rely on heat detection aids only to identify cows bulling.

You need to use observation, heat detection aids and records to make balanced decisions.

We have found in our practice that the detection rates can increase to between 60-70% with heat detection aids.

So, let's take a herd with 100 cows which are ready for service with a 50% conception rate. If the herd has a 40% heat detection rate, 40 cows will be served and 20 of these become pregnant.

If we use heat detection aids and increase the rate from 40 to 70%, we are now serving 70 cows and 35 of these will become pregnant. Fig. 1 compares the difference as we now have 35 compared to 20 pregnant cows, or 75% more in calf!

That is why a good heat detection rate is essential to good reproductive performance, especially as conception rates are declining. There are other factors which can influence heat detection and some of these are listed here;

- Lame cows do not come bulling.
- Negative energy balance disrupts cycles.
- Cows need space to show oestrus activity, they need to be on a surface where they will not slip, well lit buildings, very hot or very cold weather will reduce activity.
- Low number of cows bulling will reduce the amount of activity.

Good fertility is down to a combination of factors and a team effort. Heat detection is vital to maximise the number of cows presented for service. If we have poor heat detection, no matter how good our conception rates are, reproductive performance will be disappointing. ■