

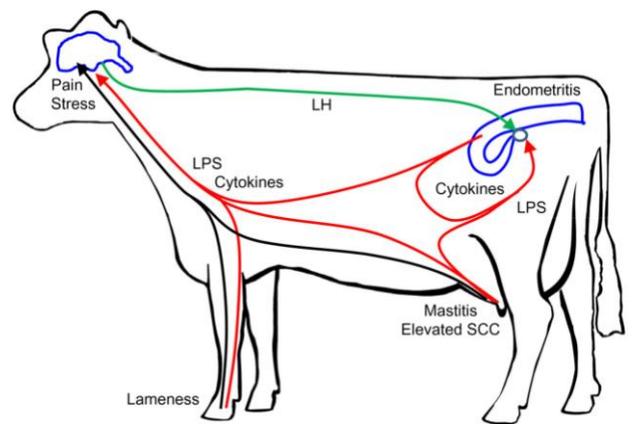


Optimising Dairy Fertility – a must read

Improving dairy herd fertility and productivity depends on maximising pregnancy rates (the proportion of inseminations resulting in a pregnancy). However, pregnancy rates in dairy cattle are at an all-time low in many countries. A recently published study has looked into factors that influence pregnancy rates with some interesting findings.

Areas they have reiterated from old literature:

- Insemination to a standing heat increases pregnancy rates
- Insemination was most successful 11¹/₂ hours after the onset of increased activity. This supports the AM:PM rule for insemination - animals observed in oestrus during the morning are inseminated in the afternoon or evening, and vice versa
- Uterine disease, lameness, poor BCS and cases of clinical mastitis 14 days prior to and 7 days after insemination significantly reduces the number of pregnancies. This is due to the following:
 - Chemical responses to stress, pain and bacterial infection influence reproductive function at the level of the brain and ovary by reducing hormone peaks and therefore delaying ovulation in relation to oestrus behaviour. (See picture – red for negative influence on reproduction) Dominant follicles (egg due for ovulation) will also be smaller. Incorrect BCS and elevated SCC reduces the strength of and delays onset of oestrus after a PG injection. Activity monitoring systems will also be subject to these influences.



New findings:

- A milk somatic cell count (SCC) >200 was the only significant factor that affected pregnancy rate. Specifically, pregnancy rate was reduced by 10% if milk SCC exceeded 200,000cells/ml between 0 and four weeks before insemination.
- Delaying insemination by 8 hours in cows with elevated SCC returns pregnancy rate closer to average for normal cows i.e. around a 10% improvement i.e. repeat serve at 11.5 hours post standing and 8 hours after that – the economics of serving cows with an elevated SCC twice need further scrutiny as this is probably not cost effective and we do not have an exact optimal time for this serve – an area to be investigated further.
- Possibility to test the benefits of holding injections (GnRH Receptal) in these cows – again needs further investigation

This study by Bijker and others highlights the complex link between cow and more specifically udder health on the overall fertility of the herd and whilst most farms have protocols in place for fertility this should encourage further scrutiny of udder health and performance. Reducing clinical disease needs to be a primary focus but it now appears that subclinical mastitis in the herd is even more important to the long term fertility and growth of modern dairy herds.

Hungarian Farm Study Tour – Phillipa Page MRCVS

Of the farms we visited around Hungary, they ranged from milking 800 – 2500 cows all indoor housed in either cubicles or cubicles with an outdoor corral system. The bedding substrates ranged from sand, to recycled manure solids, mattresses and straw, with the choice of material being determined by the manure handling system. Some of the dairies were the old state style dairy buildings, often made of wood with lower roof systems and narrow passage ways, whilst other dairies were purpose built with a more UK/USA type shed appearance.

All units reported that a major problem was heat stress, as temperatures within the summer regularly reach 35-38°C. The colder winter temperatures of -10 - -20°C did not cause a significant problem. Therefore fans and water mist cooling systems were a common feature in most sheds to reduce the impact. Some of the units had climate controlled cubicle sheds in which the fans started automatically at 18°C and the water misters at 23°C.

The rates of mastitis were reported to be low with between 5-20 cows being milked in the mastitis group at any one time. This was difficult to accept in some cases and it would have been interesting to look into their records in more detail. The average somatic cell counts were reported to be around 200-270,000 cell/ml. Their milking procedures were consistent with the UK. One farm that has had a mastitis problem focussed heavily on training and monitoring the staff. They had cameras in the parlour that recorded each milking and training of the milkers was refreshed every 6 months!

All farms operated by using a large number of staff compared to the UK, with an average of 20 people employed on farm to work with the milking herd and calf rearing. The staff were

predominately unskilled and so every task was completed using vet written protocols derived from the UK/USA and this appeared to be very successful in the health and production of the herd.

Every farm that we visited specifically mentioned the success of their herd being related to the success of the transition cow, fresh cow management and achieving at least 0.8 kg dlwg/day in their heifer replacement calves. These areas usually had a skilled manager overseeing unskilled staff that had set checks and protocols to follow. An example of this is from day 0 – 21 the rectal temperature of every cow was taken and any readings above 39.5°C were investigated and treated. At days 7, 14 and 21 a vaginal examination was performed to check for discharges and a rumen score (visual observation of the rumen) was recorded. Again any abnormalities were recorded and acted upon.

This attention to detail was certainly viewed to be worthwhile and is consistent with the message in the UK. Early detection of problems is vital and assessing your transition cow management is crucial to maximal yields and to getting that cow back in calf.

Interestingly the fresh cows 0-30 DIM were milked 4 times a day. Their length of milking time allowed for this and they were achieving an extra average 500 litres over the lactation and a reduced mastitis risk. The average milk yields were reported as 30-35 litres/day ranged across the farms visited. The lactation average of herds in Hungary is 2.5.

This trip was very interesting and provided an insight into dairy production in a country where there was accessible labour, albeit it cheaper and unskilled and a dubious EU subsidy scheme.

Reminders

The 520056 number is no longer in use!

After some years this number has finally been disconnected and soon will no longer divert through to the practice!

Please put these numbers into your phone:

Large Animal: 01452 543 999 or

Small Animal: 01452 543 990

Reminders

TB Day 1 and 2

Animals due for slaughter between TB test days need to be identified to the testing OV and not tested on day 1. Update BCMS as soon as animals go to slaughter.