

Learning from your cousins...

THE 46th Annual Conference of the American Association of Bovine Practitioners (AABP) took place in Milwaukee, Wisconsin, from 19th to 21st September.

I was fortunate enough to attend the conference itself plus an excellent two-day pre-conference seminar on *The replacement heifer from birth to calving*.

Travelling alone to a foreign

country even when they speak the language can always be a bit lonely. Catching a taxi from General

Mitchell International Airport, I asked my driver what Milwaukee was famous for, and he replied: "Brewing and cheese." I knew I was going to get along fine!

The AABP conference has many pre-conference seminars and this was the 10th year of running *The replacement heifer from birth to calving*. Big names in the world of youngstock veterinary such as Sheila McGuirk, Sandra Godden and Rob Corbett all contributed. Thirty delegates from eight different countries attended. As the recognised "youngstock vet" in our practice, I was very keen to further my knowledge by learning from the best, but the bonus of discussion amongst such a breadth of nationalities added to the opportunity.

Lectures on day one ran from 8am to 10pm – you had to be keen to go the distance! Rob Corbett began proceedings discussing the relationship between management and nutrition of the dry cow and the health of the neonatal calf. Essential to getting a strong, healthy calf is having a mother in the same condition.

Plasma cortisol levels increase in the cow around calving as they are needed by both the uterus and for development of the mammary gland. Environmental and physiological stresses increase cortisol compounding the situation, leading to immunosuppression and increasing the risks of metritis, mastitis, etc., in early lactation. Ensuring adequate feed and

water access, not overcrowding, and providing appropriately balanced diets minimise stress on the dry cow or heifer.

Some 50-55% of lactation 2+ cows in the USA have sub-clinical hypocalcaemia but worryingly so do 20-25% of heifers. The effects of this are lack of muscle contraction, impaired teat sphincter closure,

figures are worldwide). Of this figure 78.6% are born dead (but most start off alive) and 21.4% are born alive, but die within 48 hours.

Are we guilty of assuming all farmers know how to calve a cow? Assistance is bad, we were told. Bad for the calf as it reduces its survival, increases injuries and infections. Bad for the cow as it reduces her production and fertility. And bad for people as they curse and it reduces morale!

In the USA, herds with the lowest calving mortality were those who had limited access to mechanical aids – they were locked away and a manger had to be found before they could be used.

Vets and farmers often walk away following a calving. **Table 1** shows normal calf behaviour following birth. If a farmer does not observe normal behaviour then resuscitation steps are needed; of course if he doesn't stop to observe then he can't do anything!

A clean, dry towel rubbing along the top line from tail head to head stimulates breathing, then focusing on ears around the eyes and nose – thus mimicking the actions of the mother. Pinpoint pressure across the nasal septum, or at an acupuncture site externally on the nasal septum, are other techniques.

However, the best technique a farmer can perform is a bucket of ice water on the head of the calf or in its ear. Appropriate training in perinatal management is something we neglect as vets – but is an area in which we can make huge gains for our clients and their animals.

After an 8.1% stillbirth rate, pre-weaning mortality rates in the USA are 7.8-11.1%, Sandra Godden explained, with 53% due to scours and 21% BRD; 19% of US heifer calves have failure of passive transfer (IgG<10mg/ml), but the best herds achieve below 5%. With 31% of deaths in the first three weeks being directly attributable to FPT, this represents a huge area of opportunity for the vet.

The benefits of achieving successful passive transfer are



Central Milwaukee – home to the 46th AABP Annual Conference.

decreased morbidity and mortality, improved growth rates and feed efficiency, decreased age at first calving and increases in first and second lactation yields. The five Qs of colostrum management are well known as: Quality, Quantity, Quickly, sQueaky clean and Quantify.

In our practice we regularly blood sample calves aged 1-7 days for total proteins at routine visits, to assess passive transfer. We then assess this in-house with a refractometer.

In the USA, additionally they quantify colostrum by regularly sending samples for microbial analysis, the goals being: total plate count <100,000cfu/ml and total coliform count <10,000cfu/ml. A study in the USA showed that 43% of 827 samples from 67 herds exceeded this.

The consequences are that these pathogens may cause disease e.g. *E. coli*, *Salmonella*, *Mycoplasma*, and it lowers serum IgG.

Reducing sources of contamination from the cow right through to administration to the calf is another area the practitioner can become more actively involved in.

Acknowledgements

The author would like to thank both Shepton Veterinary Group and Zoetis Animal Health for co-sponsoring his trip to the AABP Annual Conference.

OLIVER TILLING presents the first of his reports of a visit to the conference of the American Association of Bovine Practitioners in Milwaukee, covering a pre-conference seminar



prolonged calving and delayed uterine content expulsion, reduced GI contraction and subsequently reduced DMI and increased LDAs.

Also, calcium is a secondary messenger in the immune system, so there is a reduced immune response. How do we prevent what is a similar situation in British cows? Stimulating bone calcium resorption and intestinal calcium absorption at parturition with Vitamin D sterols, an anionic diet low in calcium and targeted use of calcium drenches all help.

Ketosis is an issue in the USA but focus on the effects of limited protein in a cow's body was new to me. You can't have a negative energy balance without a negative protein balance = thin cows. Protein is important for antibodies and cell signalling, and it is a source of glucose for the foetus and mammary gland.

Essentials

Managing dry cows properly with diets that include a partial DCAD, energy and protein; minimising stress, whilst providing suitable levels of energy and protein for foetal growth, immune systems and colostrum quality are all essential. We must not get used to thin calves and the days of feeding dry cows straw and fresh air must end!

Sheila McGuirk informed us that 8.1% of calves are dead within 48 hours in the USA – a stillbirth (similar



Rob Corbett trying to change what we view as acceptable.

Normal calf behaviour following birth

- Head righting in minutes
- Sitting in 5 minutes
- Attempts to stand within 15 minutes
- Standing within 1 hour
- Suckling within 2 hours
- Heart rate: 100-150 beats/minute
- Respiratory rate 50-75 breaths/minute

Table 1.

Oliver Tilling, BVSc, BSc, MRCVS, went to Liverpool University to study zoology in 1998, completed a BSc in 2001 and went on to study veterinary science, qualifying in 2006. After four years in mixed practice in Skipton, North Yorkshire, he joined Shepton Veterinary Group in 2010, where his particular interests are in youngstock and fertility work.



MILWAUKEE HAS A LOT OF GOOD HISTORY.

STOP BY AND DRINK IT ALL IN.

LOWER LOBBY
HILTON MILWAUKEE CITY CENTER

Milwaukee's famous industry which the author took a keen interest in. * Even the local baseball team is called "The Brewer's".