



## Johne's Disease; Part 1 - A Dairy Herd Perspective

### Part 2 – Johne's, impact and control in the beef herd (next newsletter, March 2018)

#### National Action Group on Johne's

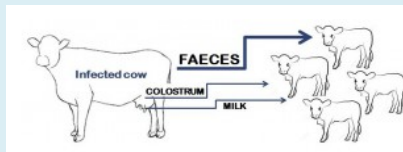
The National Action Group on Johne's now covers over 82% of UK milk supply including Arla, Muller and First Milk suppliers. There are over 620 vets accredited by the BCVA in Johne's advice in the UK including Michael Fallon, Natasha McCappin, Niall MacDonald and Mark Crawshaw at MBM Vet Group. There is a target for over 95% of UK milk supply to be covered by December 2019 and therefore it is likely to be something all producers need to think about or will need to think about in the near future. All farms will be expected to have one of 6 control strategies in place. Further information on the scheme can be found at: <http://www.actionjohnesuk.org/>

#### What is Johne's Disease?

Johne's is a chronic wasting disease of the intestine caused by Mycobacterium Avium Paratuberculosis (MAP). Whilst nearly all infections occur within the first year of life and there is a degree of age related immunity, 80% of infections are acquired in the 1<sup>st</sup> month of life and so this is the critical time to reduce spread. Clinical signs usually occur after 2+ yrs and include weight loss & profuse diarrhoea often with bubbles. MAP infection thickens and inflames the gut preventing nutrition being absorbed from the diet, therefore although the animals tend to continue to eat they will scour and lose weight. Some Johne's cases are noted as underperformers prior to clinical signs.

#### How Does it Spread? Johne's disease spreads in 3 main ways..

1. **FAECO-ORAL**
2. **Colostrum and milk**
3. In utero



Johne's infection is mainly caused by calves ingesting faeces from contaminated bedding, udders, teats or on dirty buckets of colostrum or milk. Much less commonly the disease can be acquired in the womb or later in life.

Successful management of Johne's revolves around breaking these routes of transmission. The major source of infection is the calving pen. When a Johne's positive cow sheds MAP in her dung it has the potential to infect multiple calves in the pen, not just her own calf. Therefore *known Johne's positive animals should not go in the normal calving pen*. They should be clearly identified (a red management tag is ideal for this purpose) and housed and calved in a separate calving area; a Johne's Leper colony. *Their calf should also be marked with a red tag as there is a high probability it will also be infected.*

Snatch calving of Johne's positive animals (snatching the calf away before even touching the ground to reduce faecal contamination and risk of infection) was used as an option to manage positive animals, however it has a number of problems; 1. The farmer needs to ensure they are present at calving, 2. The calf needs Johne's free colostrum, there may be stored colostrum on the farm but can you guarantee it is from a Johne's negative animal? 3. After all this effort the calf may have been infected in the womb and so may still be positive. For these reasons the author prefers to allow a natural calving and assume the calf is Johne's positive. Snatch calving may be used if a high genetic merit Johne's positive cow was in calf to reduce the risk of that calf being infected, however, in this case use of sexed semen and embryo transfer to a Johne's negative animal would be preferable to maintain the bloodline.

#### How do I know if I have it?

Clinical cases are the tip of the iceberg, it is estimated that for every clinical case a further 10 to 30 animals in the herd are infected. **If you have Johne's disease in your herd, it will spread, and it will get worse if you do nothing**, so it is imperative to know your status. It is difficult to be sure you don't have Johne's disease, but if you have never had a clinical case and you have a truly closed herd (no bull purchases) it is possible you are Johne's free. In that case the objective is to keep Johne's disease out of the herd by remaining closed. Most herds will have Johne's disease to varying degrees. Testing is the best way to determine if Johne's disease is present on farm.

Testing options include:

1. Quarterly milk testing.
2. 30 cow screen
3. Test pre dry off
4. Test pre dry off and pre breeding

Which testing method is best for you will depend on your herd and circumstances.

N.B. Testing within 45 days of a TB test is not advisable. If quarterly milk testing is due in this time frame it would be preferable to ask your milk recorder to push testing back until 45 days has past.

## How do I Manage Johne's Disease?

If Johne's disease is present on farm it is very difficult to eradicate, however active management has been proven to prevent further spread and reduce the prevalence of infection within a herd. It is beyond the scope of this article to go into these management strategies in any depth, but milk buyers will expect producers to have Johne's strategies in place. There is currently six possible strategies, to discuss which option suits your farm please

contact either Mark, Michael, Natasha or Niall, the practices BCVA accredited Johne's veterinary advisors.

1. Biosecurity Protect and Monitor
2. Improved Farm Management
3. Improved Farm Management & Strategic Testing
4. Improved Farm Management Test and Cull
5. Breed to Terminal Sire
6. Firebreak Vaccination



## CALVING – Out & breathing is only the start...

During calving heifers & cows can become exhausted and dehydrated, which can lead to poor contractions and prolonged calving. Where dilation is complete and calving is not progressing quickly it is advisable to help with delivery as calf survival is decreased with prolonged calving. However interference too early in the calving process can give an adrenaline spike which can halt contractions and prevent full dilation. As a rule of thumb interference may be needed if a cow has passed its water bag and not progressed after one hour (in the case of heifers two hours), as by this point we expect full dilation to have occurred. If interference is required do it CLEANLY and with lots of LUBRICANT, check for correct presentation, if the feet/head are presented incorrectly and you have not been able to correct them within ten minutes call the vet. If the presentation is correct a strong pull by hand should expose the front legs to a hands breadth past the fetlocks (knuckle) or if backwards the point of the hocks – if this cannot be done the calf is likely TOO BIG SO CALL THE VET DON'T GET STUCK!

In cases of difficult or prolonged calving, the calf will have suffered stress, this reduces colostrum absorption, and uses up the energy reserves that sustain healthy calves until the first feed – this energy was essential for the calf to dry and stay warm. A healthy calf should sit upright in the first 10mins after birth and be on its feet within 30-60mins. If your calf has taken more than 15min to sit up or an hour to stand it should be considered compromised and tubed with 2-3ltr of either fresh cleanly milked quality colostrum/stored colostrum or one full packet of Immucol Platinum calf replacer ASAP, ideally it should also have a calf jacket or be deeply bedded. Colostrum should be fed at 38-40°C for best absorption.

An exhausted dam will not lick the calf dry and encourage it to pass its first dung, stand and feed, also not all cows are good mothers, extra care and attention is for all calves that are poorly mothered not just the ones where the dam/calf is clearly compromised. If a calf is shivering, reluctant to stand or has poor suck reflex/cold mouth it is likely becoming hypothermic, hypothermia is one of the most common causes of death in young calves so it is essential to watch for it and rapidly take steps to warm these calves (calves that drop below 35 degrees for any significant length of time suffer irreversible organ failure from the slowed circulation and die a few hours after being reheated therefore every minute is critical).

## SCOUR IN THE FIRST 5 DAYS

Calf scours are **caused by viruses, bacteria and parasites**; they can be deadly for young calves as they rapidly lose fluids & electrolytes through the gut faster than they are taking fluids in and dehydrate - hydration is essential for young animals to maintain their body temperature and so they become DEHYDRATED & HYPOTHERMIC

**MYTH: When a calf develops scours within the first five days the calf was overfed with milk or milk replacer.**

- **Calves do not commonly scour because of over feeding, it is because they have been exposed to an infectious organism.**

Where did the calf get exposed?

Calves scouring in the first 5 days will have been infected in the calving pen, for this reason we commonly see scours more and more regularly as the calving period progresses because the infectious challenge in the pen is rapidly increasing when the calving box is not cleaned/re-bedded regularly, i.e. the cleanliness of the calving pen massively impacts the health of young calves. Good colostrum management will help recovery but is unlikely to prevent scour in calves born into a dirty environment.

## CALF NEEDS A DRIP?

When scours are severe such as in the case of E-coli septicaemia (result of insufficient colostrum/high dirt challenge), fluids are lost so fast a drip is the only option for survival. **If presented early to the vet the majority of these calves will respond and survive. Your calf needs a drip if:**

- IT CANNOT STAND
- IT STANDS ONLY WITH ASSISTANCE
- BODY TEMPERATURE IS BELOW 37°C



**MBM Veterinary Group**

**MAUCHLINE**  
(01290) 550452

• **KILMARNOCK**  
(01563) 522701

• **BEITH**  
(01505) 502126

**f Find us on Facebook**

[WWW.MBMVETGROUP.CO.UK](http://WWW.MBMVETGROUP.CO.UK)