



Farm news



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Evidence-Based Veterinary Medicine

What is it and how can it be applied to Farming?

As farm vets, it is important to try and take an evidence-based approach to our clinical decisions.

For example, a new calf vaccination protocol for a group of 50 calves was introduced and then antibiotic use for calf pneumonia was compared from the current year to the previous year. Following the new vaccine protocol, 2 calves still needed treating whereas last year, 30% of calves needed treatment. The vet (who was expecting it to work) might assume that the protocol is great whereas the farmer (who is less convinced by vaccination) might not accept anything less than 100% success as an outcome. This tendency to look for patterns and make assumptions based on previous experiences is known as 'bias' and is a natural human tendency but how can we get over this to come up with the best answer?

Hierarchy of evidence: calf pneumonia vaccine example

Type of evidence	Example	Quality of evidence
Anecdotal	Mr Smith uses the vaccine on his farm, and it works well so it must be good.	Poor.
Expert Opinion	A leading Vet employed by a milk buyer to speak to farmers about calf rearing recommends the vaccine.	Better than a single anecdotal opinion but still poor and subject to bias!
Observational Studies	A Vet in your practice has retrospectively compared treatment outcomes of 6 different farms that are using the vaccine.	OK in the absence of any specific published data.
Randomised Control Trial (RCT)	A study in which a group of cows are randomly assigned to 2 groups to test a specific drug, treatment or other intervention. One group has the intervention being tested, the other has no intervention (or a placebo). The treatment outcomes are then compared using statistical methods.	The gold standard for scientific evidence. This is the level that we encourage our vets to use whilst making decisions on new treatments etc.

A Stepwise approach to using EBVM

- 1. Ask** – what is the specific question you are trying to answer?
- 2. Acquire** – what evidence is available that can answer the question?
- 3. Appraise** – what is the quality of the evidence (anecdote vs RCT), can we believe the source?
- 4. Apply** – implement a change on-farm based on your findings.
- 5. Audit** – review the outcome at specified time intervals to monitor whether the change is having a positive effect.

(Adapted from Hyde and Remnant, 2016)

Examples of EBVM in Farming

- AHDB mastitis control plan.
- Dairy Industry Standard Locomotion Scoring.
- TB Advisory Service (TBAS).

Just because there is an absence of evidence, it does not mean that a treatment does not work. I am not suggesting that EBVM should replace experience but rather that it can be used as a tool to improve knowledge and help to problem solve on-farm.

A word of caution! Beware the internet. It is very tempting for farmers (and vets) to Google an answer to a problem, but there is so much information (good and bad) out there that it is important not to believe anything without first scrutinising the source. Farming forums are a great way of creating an online community, but it is easy for everyone who comments to appear to be an expert.

For more information call our practice on **01332 294929** or email farmandequine@scarsdalevets.com



Leptospirosis – Take Control

Sandy Jamieson BVM&S MRCVS

We are delighted to inform you that Leptavoid-H is now back in stock.

In the absence of a consistent supply of Leptavoid-H last spring, we decided to protect animals with an alternative vaccine. Leptavoid-H is back in stock and for the following reasons we are now recommending vaccination against Leptospirosis with Leptavoid-H.

- Leptavoid H affords clinical protection against *Leptospira Hardjo Bovis* and *Hardjo Praejitno*, which are both present in the UK
- Leptospirosis is a zoonosis (can infect people) and so it is important to vaccinate your herd to protect yourselves and your staff.
- To cover animals for both UK strains, if you used a different vaccine within the last twelve months, they will need to begin again with a full primary course (2 doses 4-6 weeks apart).
- The ideal time for a booster is before turnout so get your order in soon!

Upcoming Farm Events

Mastering Medicine Courses

Don't forget that our courses will be running on the first Thursday of every month up until August for Dairy, Beef and Sheep clients.

Lambing Courses

Areas that will be covered include:

- Repositioning incorrectly presented lambs
- Injecting and stomach tubing lambs
- Treating ewe diseases associated with lambing
- How to use a head rope

Our lambing courses are back for 2020!

Tues 11 Feb

Two courses

10am and 2pm

Tues 24 March

Two courses

10am and 2pm

Wed 25 March

Two courses

10am and 2pm

Please call 01332 294929 for more information on our Farm events or to book your place.

Alfreton Practice

Remember you can collect medicine from our Alfreton Practice. You can also register your small animals here too.

Unit 2, Nottingham Road, Alfreton, DE55 7GR

Tel: 01773 304900



Tackling Calf Scour Before Calving

Emily Sycamore BVetMed CertAVP MRCVS



Vaccinating pregnant cows to provide specific immunity against Rotavirus, Coronavirus and E Coli (e.g. Bovigen Scour) is a very successful way of managing calf scour. In these times of restricted antibiotic use and societal concerns over calf rearing, vaccination is an extremely useful tool.

Calves are effectively born with no immunity so rely entirely on colostrum to protect them against disease. Colostrum (production of colostrum) starts around 3 weeks before calving; in order to get high levels of specific immunoglobulins (IgG) in the colostrum, a single dose of vaccine should be given at least 4 weeks (but no more than 12 weeks) before calving.

There have been some robust studies carried out looking at the effect of a single dose of Bovigen Scour pre-calving and then challenging the calves with Rotavirus, Coronavirus and E Coli; the results were as follows:

- **No deaths** in calves from vaccinated cows compared to 40% mortality in calves from unvaccinated cows.
- **Decreased duration of scour** and severity of clinical signs in calves from vaccinated cows.
- **Reduced excretion** of the bugs by ~50% in calves from vaccinated cows which means less environmental contamination.

It is important to note that colostrum management is still key in the control of calf scour; especially because the specific immunity from vaccinating the cows will only be passed on if the calf receives appropriate quantities of colostrum (10% of body weight) within 6 hours of birth. It is also beneficial to continue feeding colostrum from vaccinated cows for the first 7 days of life.

Crypto Overview

38% of calf scour cases in the UK are due to Crypto (*Cryptosporidium Parvum*); the second most common cause is Rotavirus. Interestingly, Crypto is also the second biggest cause of child diarrhoea and death worldwide which makes it a true 'one health' topic.

Crypto is very complex in terms of immunology which makes the development of a vaccine almost impossible. It also only requires a few oocytes to cause disease in a calf, but each calf will excrete 1010 oocytes in a 1-2 week period following infection. This makes managing the level of environmental contamination very difficult. Steam cleaning is essential followed by an appropriate oocidal disinfectant (such as Interkokask).

Successful treatment protocols for Crypto need to reduce the severity of the clinical signs, limit the number of oocytes excreted and avoid re-infection whilst allowing the calf's own immunity to develop. There are two options:

- **Halofuginone** is Crypto-static which means it slows down the rate of infection but doesn't kill it off altogether. Halofuginone has a very narrow safety index (it is toxic to calves at 2x the normal dose and lethal at 10x the dose) so accurate dosing for the calf's weight is essential. Halofuginone is best used as a preventative by dosing calves from day 1 for 7 days. It is also advisable to give it on a full stomach (i.e. during or <1 hour after a milk feed) and not to use in calves that have already been scouring for >24 hours.
- **Paromomycin sulphate** is a relatively new product for treatment and prevention of Crypto and available as both an oral drench (fed for 7 days) or powder for adding to milk replacer. There are fewer safety concerns compared to Halofuginone.

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