

MAKING SENSE OF MEDICINES

Delayed treatment could compromise vaccine efficacy

Many producers will admit to occasionally delaying a booster vaccine or not storing it in the fridge, but doing so could leave vaccines ineffective, as **Olivia Cooper** reports

Vaccines are an important part of farm animal health, providing protection against both common and devastating diseases. But they are not infallible.

No vaccine provides 100% protection, 100% of the time, even when used according to the protocols. And too often those protocols aren't followed, rendering the vaccine useless.

One of the commonest stumbling blocks is not storing vaccines in the fridge at between 2C and 8C, says John Macfarlane from Alnorthumbria Vets in Alnwick.

"I don't think all farmers are fully aware of what can go wrong with vaccines," he says. "They are pretty

sensitive and can't be outside the temperature band for long without losing efficacy."

Some must reach ambient temperature before use, and others have to be stored away from light. "If the primary shot is ineffective, then none of the boosters will work either, so the animals will always be unprotected," says Mr Macfarlane.

According to a recent survey, 34% of farmers vaccinating against BVD never referred to the data sheet. More than a fifth applied the wrong dose or used an incorrect route of administration. And while all farms did give the required two doses as the primary course, 48% gave them at an incorrect interval, and only 24% completed the pri-



VACCINES: KEY STUMBLING BLOCKS

- * Not refrigerating vaccines
- * Not administering correctly
- * Not completing the course within required time frame

Take-home messages

- * Read and follow the data sheet [SC = subcutaneous, IM = intramuscular]
- * Store and transport vaccines at 2-8C
- * Don't keep open vials for future use
- * Diarise when vaccines must be given



Following guidelines and refrigerating vaccines is crucial as they cannot be stored outside the 2-8C band for long without losing efficacy.

mary course at an appropriate stage prior to service.

Vet Maarten Boers from the Livestock Partnership says he recently discovered two farmers who were giving one type of BVD vaccine subcutaneously, when that particular brand should be given into the muscle.

"A lot of mistakes are being made, and that potentially means herds aren't being protected," he warns.

Farmers should check the sell-by date on any medicines, and not leave part-used vials for later use, he adds. "Once a vial is opened it needs to be used up within eight hours - you can't keep it to use as a booster a couple of weeks later."

Some vaccines require a primary course of two doses within a set timescale, followed by annual boosters, says Mr Macfarlane. "A common misconception is the first dose will give some level of immunity, but it doesn't. The first dose primes the immune system ready for the second dose, which then gives the immunity after a certain

period. You really need to think ahead."

The BVD vaccine, which is a two-stage dose, is often used incorrectly, he warns. "As part of our practice's BVD control trial last year, we tested 36 farms and found five were infected." Three of those had been vaccinating for a long time, but either failed to consistently give the second dose within three weeks of the first, or hadn't vaccinated before the cows went to the bull.

"You only need to get it wrong one year and your cows will be unprotected for the remainder of their time in the herd," says Mr Macfarlane.

Of course, there does have to be a practical slant to medicine use, he adds. "Medicine instruction leaflets may recommend against concurrent use of different treatments, or administration to sick or injured animals. However, in some extensive systems gathering the stock is a major management task, so complying with that advice can present a dilemma. If not treating them

Giving vaccines at the incorrect interval could leave them ineffective.

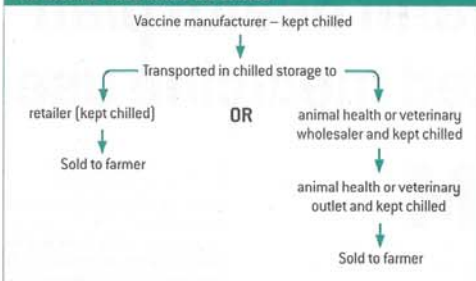
today might result in them missing a vaccine altogether, it may be preferable to treat them anyway."

A balance also has to be found in the amount of vaccines used. "You need to identify the diseases in your flock or herd and decide how best to control them." Farmers should draw up a health plan with their vet and keep a calendar of when vaccines need to be ordered and administered.

"Make sure your staff are trained in vaccine handling and use," says Mr Macfarlane. "And be careful not to overwhelm your stock. Often farmers do foot trimming, worming, vaccinating, and pregnancy diagnosis at the same time. But some products shouldn't be given together, and if you challenge the immune system too much it won't be able to respond properly to anything."

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THE VACCINE 'COLD CHAIN' EXPLAINED



GEORGE BARBER, BRACKENSIDE FARM, BERWICK

Vaccine delays can have big cost

* Sheep and beef farmer George Barber recognises the importance of vaccinating at the right time and following manufacturer's guidelines.

A couple of years ago he was late with the pneumonia vaccine, which must be given to calves in two doses at least five and three weeks before housing. "We had a big outbreak and a fair vet bill. It's so important to get it right," he says.

Mr Barber keeps 300 ewes and 100 suckler cows at Brackenside Farm, Bowsden, Berwick. Finishing everything, he also buys in Mules to cross with Suffolk tups, putting the resulting cross-breeds to Texel rams. "Some years ago we had an outbreak of toxoplasmosis in sheep, and campylobacter causing abortions," says Mr Barber. "We don't ever want to see that again."

Each year, Mr Barber meets with his vet and draws up a health plan for both farms, including vaccinating the cattle against pneumonia, leptospirosis, BVD, rotavirus and clostridial diseases. Sheep are vaccinated against toxoplasmosis, enzootic abortion, pasteurella and clostridial diseases, and, more recently, foot-rot.

"The sheep are housed from January until they lamb in March, and they have always had bad feet," he says. "We would pare their feet twice, but it was a never-ending battle against foot-rot and scald. Since we started vaccinating we haven't had a single bad foot - it's been brilliant."

Following problems with pasteurella and clostridial diseases, the sheep now get a combined vaccine before tugging

and again before lambing. Mr Barber administers all the vaccines and keeps up to date with new products via his vet or farming magazines.

"I always read the label - they have lots of information on them about how to store the vials and administer the vaccine," he says.

Having lost a few calves in a scours outbreak a few years ago, all the cows now get a rotavirus vaccine before they calve. "It costs about £6 a dose, but that's a lot less than a dead calf. I'm also of the opinion the BVD vaccine is almost impossible to value, because you don't know if you've got BVD around. The risk is far too great not to use it."

"Vets have to record the minimum and maximum temperature of their car boots, when they have medicines in there - and they don't carry vaccines unless they have a cold box," explains Mr Macfarlane. "We are required to check the stockroom and fridge temperatures daily - and that requirement goes right back up the supply chain."

When collecting vaccines farmers should keep them in a cold bag and then transfer directly to a working fridge at the farm. When removed for use, follow the instructions on the leaflet, and only take as much as needed for every batch of animals.



Making sense of medicines

The Farmers Weekly prescription for a healthy livestock sector

Campaign aims

- 1 To raise awareness of best practice use of medicines
- 2 To safeguard the continued effective use of medicines to maintain long-term livestock health and productivity
- 3 To encourage wider adoption of RUMA guidelines

Get involved

Online For more information on the campaign, visit www.fwi.co.uk/

medicinecampaign
Forums What are your thoughts on possible regulation of antibiotics use and are you concerned about wormer resistance? Share your thoughts on our forums www.fwi.co.uk/medicinedebate
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