PRACTICE NOTES

FRAME, Swift and Partners is a 12-vet mixed practice working from a purpose-built, greenfield site at Carleton, Penrith.

In the Seventies and early Eighties, this was a three-man, predominately farm practice, but it has grown in response to the ever-changing demands on the veterinary profession.

While all the vets pride themselves on being general practitioners, many in the practice now have post-graduate qualifications in subjects as diverse as small animal medicine, cattle fertility, cattle health, sheep health, anaesthesia and equine work.

In addition, due to the facilities available and the good coffee brewed, the practice is extremely fortunate to have specialists in fields such as dog fertility, dermatology and advanced equine surgery visit us regularly. This is important for the area, owing to the great distances and costs incurred in otherwise referring to the university hospitals.

Scotland considers eradicating all BVD

Richard Anderton, of Frame, Swift and Partners, looks at how wiping out this disease could help on a national scale as well as at farm level

Bovine viral diarrhoea (BVD) has been mentioned frequently in the farming press recently, after the Scottish Government launched the idea of a national eradication scheme.

Although this has so far only been published in a consultation document, if there is enough support from the industry it may develop into a compulsory scheme.

It has been calculated that, for the Scottish industry, eradication of BVD could be worth between £50 and £80 million over a 10-year period.

Indeed, some parts of Scotland are already BVD-free, or are working voluntarily to develop a BVD-free status – such as Shetland and Orkney. And of course, there are other parts of Europe where BVD has already been eradicated.

All this interest in the eradication of this disease and its economic benefit shows that all cattle farmers should be concentrating on controlling BVD in their herds, regardless of any national measures that are in force.

So what problems exactly can be caused by the bovine viral diarrhoea virus? And why is it so important? Unfortunately, these are not straightforward questions to answer as BVD infection can lead to the development of many different disease conditions, depending on both the age of the animal and/or its stage of pregnancy. It is also important to remember that the presence of infection on a farm may still cause significant problems in the background without causing obvious outbreaks of disease.

In adult animals, by far the most significant effect of BVD infection is on fertility. If a naive cow within the herd is infected, there may be a slight transient rise in temperature, maybe even a mild scour and drop in milk yield for a short period of time – but these can easily go unnoticed and are of little significance.

The much more important outcomes of infection depend on whether or not this cow is in calf.

In the non-pregnant cow, BVD infection can cause reduced conception rates, if the cow is served around the time of exposure to the virus.

Pregnant? BVD infection can lead to the development of many different disease conditions

In the pregnant cow, during the first three months of gestation, infection can lead to early embryonic death (the cow just comes back into oestrus), early abortion, mummification of the calf or the production of a normal but persistently infected (PI) calf (see later).

In the second three months of gestation, BVD infection can produce calves with congenital defects, especially affecting the brain and central nervous system

In the third three months of gestation, infection can result in late abortions, still-births or weak calves.

The effect of BVD infection on younger animals is due to the suppression of the immune system by the virus. As with adult animals, it is unlikely that youngstock exhibit signs specifically as a result of the virus, but by interfering with the immune response for up to 10 weeks after infection, the infection leaves animals much more susceptible to any other diseases – scour and pneumonia being by far the most significant.

Not only would the introduction of BVD have a dramatic effect on herd fertility in a naive herd, but even in a herd with a 'natural' level of circulating infection (so-called 'endemic' infection), the results are still seen as the immunity of individual animals within the herd naturally waxes and wanes due to their exposure (or not) to active infection. And, of course, the risk of affecting the youngstock will still be present – the specific problems seen being influenced by both their age and the time of year that they are exposed.

As mentioned above, if a pregnant cow becomes exposed to BVD at the appropriate stage, she will produce a calf that, although appearing physically normal, is persistently infected with BVD virus. These calves are commonly referred to as PIs.

It is these calves that are mainly responsible for maintaining and spreading infection within a herd, because they will excrete BVD virus for the rest of their lives.

The majority of PI calves do not enter the adult herd, because they do not generally perform as well as their contemporaries. Indeed, they often succumb to mucosal disease at six to 24 months of age – a form of intractable and usually fatal scour.

A significant few PI animals, however, remain clinically normal, stay in the breeding herd and keep shedding BVD virus. These will always go on to produce PI calves, thus compounding the problem.

How can BVD be tackled? The widespread use of vaccines has revolutionised the control of this disease over the last 10 to 15 years, but disease eradication, as has been suggested north of the border, involves the identification of the all-important PI animal, and their swift removal from the herd.

This relies on laboratory tests on either blood or milk, making it a much more practical option for the dairy herd, where batched milk samples can be tested for the presence of BVD virus.

It goes without saying that once BVD has been eradicated from a farm, island, county or country, good biosecurity is essential to maintain the disease-free status.

With approximately 95 per cent of the national herd endemically infected with BVD, this is a very significant disease economically and one that virtually all cattle farmers are experiencing, whether they realise it or not. I would suggest you talk to your veterinary surgeon about the most cost-effective way to control BVD on your farm.