

## BREEDING AND FERTILITY

Once Bovine Viral Diarrhoea (BVD) is present in a herd it has devastating effects on fertility, conception rates, abortion rates and calf health and mortality. With some farmers working towards BVD-free accreditation.

**JOANNE PUGH** found out more about the possibility of a national eradication scheme.

## BVD: 'We must work towards eradication or be left behind'

"NORWAY, Finland, Sweden, Denmark, Germany, Switzerland, Austria, Holland, Italy, France, Belgium, Spain..." as Prof Joe Brownlie listed the European countries working towards eradicating BVD, it became clear why he was so concerned about the lack of direction in the UK.

"If we don't start as a country now we are going to be left very far behind," he said.

Prof Brownlie may have been the man behind the development of the first BVD vaccine (made available in 1995), but his passion nowadays has gone far beyond the simple science – he is convinced the UK can control and eradicate the disease and spends much of his time educating vets and farmers and pushing for a more co-ordinated approach.

A professor of veterinary pathology based at the Royal Veterinary College's Hawk-

shead campus, he has been involved in BVD and mucosal disease research for 20 years. In the last decade he has seen much of mainland Europe embrace the advances made in the understanding of BVD while the UK only limps along.

He said the Scandinavian countries had made the most progress, with Norway and Finland BVD-free and Sweden and Denmark 'almost there'. Germany, Switzerland, Austria and Holland also had national eradication programmes in place while Italy, France, Belgium and Spain were all working towards that goal.

In comparison, the UK had only a handful of regional programmes including advanced schemes in the Shetland Islands and Orkneys and much newer ones in Norfolk and Suffolk, Somerset and Scotland.

However, the picture was not all doom and gloom and Prof Brownlie said he was aware of a growing momentum, a 'ground swell' of farmers and vet practices looking to move forward on their own or in small groups. Already, he said, groups were looking to form in Cheshire, Derbyshire, Gloucestershire and Devon.

He said there would be even more momentum once data emerged from the existing groups on the on-farm cost benefits of eliminating BVD but he was concerned by the 'piecemeal fashion' of the progress.

"How do we get industry leadership and support?" he asked. "There is no integration, yet when you look at other countries where they've got eradication programmes, they have co-operation and major regional integration. That is almost totally absent here."

"If we can't do it with BVD, a disease we know we can eradicate, then there's little hope for diseases like Johnes and TB. There are no wild vectors with this disease and we know we can succeed. The only thing that is holding us back is leadership."



Prof Joe Brownlie.

There is a national strategy group for BVD in place, which Phil Sketchley described overleaf, and Defra facilitated the formation of that group with involvement from levy boards, the NFU, NOAH, RABDF, cattle breed societies and the Animal Health and Welfare Strategy Group.

Defra were providing no funding or leadership but, Prof Brownlie said, that was not where he was looking for guidance as an eradication programme should be implemented by an industry partnership. Germany was the only European country where BVD eradication had been promoted purely as a 'top-down, Government initiative'; elsewhere legislation had only been brought in late in the day to force the 'tail end' of farmers into taking action.

What Prof Brownlie wants is a body to take ownership of a



The PI calf on the left was born on the same day as the BVD-free calf on the right and suffered health problems and stunted growth throughout its lifetime.

national BVD eradication scheme, to provide overall leadership and direction.

He said this was necessary in order to source funding for administration (perhaps partly by accessing money from regional development agencies) and to ascertain laboratory provision, the most suitable accreditation body and ways to monitor and interpret progress and results.

In other countries, he said, levy boards had provided money and so perhaps the MDC and MLC had a role to play. Ebex had already shown some interest by funding some testing, workshops and administration for the Norfolk and Suffolk scheme.

Holstein UK had also been

heavily involved in that scheme but Prof Brownlie said, although breed societies could be instrumental, they could not take on all the responsibility as they could only reach pedigree breeders.

Taking ownership would also involve an education role and, once understanding was increased, farmers could put pressure on other farmers to also become involved.

"Would you listen to the boffin from London or your mate down the road?" asked Prof Brownlie. "When you start an eradication programme, tell others about it. Trail blazers will be rewarded as it is a disease that has a win-win solution – you can do it and it is worth doing."

asking their vet for advice," said Pfizer vet Carolyn Hogan.

"As a first step, there are blood tests or for dairy farmers a bulk milk test to indicate whether or not infection is present on your farm, so just speak to your vet about the best way to proceed."

"The more farmers we can persuade to implement a BVD plan now, the more quickly we will progress as a country towards BVD-free status."

### HOW BVD EFFECTS BREEDING

Depending on when an in-calf cow is exposed to BVD, the disease can cause embryo death or re-absorption (presented as infertility or repeat breeding), abortion or birth defects/deformities. Surviving calves can be PIs (Persistently Infected) and will have stunted growth and shed high levels of the disease, infecting other cattle they have contact with.

Exposing non-pregnant cows to BVD will reduce fertility and conception rates; semen from infected bulls can also spread infection. BVD is an immunosuppressant and vets link it to problems such as pneumonia, scour, TB and mastitis. BVD vaccines work by stopping the disease passing from infected mothers, across the placenta to the unborn calf.

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THIS is the second time *Farmers Guardian* has taken an in-depth look at BVD and how to stamp it out.

To read the first article, including an update of the Orkney eradication scheme, go on-line at [www.farmersguardian.com/livestock](http://www.farmersguardian.com/livestock).

Pfizer Animal Health is on board with *Farmers Guardian* in this project and is looking at further ways to promote eradication.

"Introducing a BVD control programme is something that any cattle farmer can start by



## BREEDING AND FERTILITY

## Devising an eradication strategy that works

**FOR a glimpse of how BVD will be eradicated from the UK cattle population, cast your mind back to the 'clunk-click, every trip' public information campaigns of the 1970s, suggests Phil Sketchley.**

The chief executive of the National Office for Animal Health (NOAH) said the introduction in 1982 of the law making the wearing of front seat belts compulsory was preceded by a decade of advertising and persuasion.

"This prolonged period of education gradually converted a majority of people, but not all, to the wearing of seat belts," he said. "Only then was legislation passed to compel the remainder to belt up."

Many things may have changed since 1982, but he said this remained a good model to help farmers, vets and others understand what is likely to happen in the battle against

BVD and the big financial losses it causes.

The driving force now for the ultimate eradication of this disease is the BVD Strategy Group, chaired by Professor Joe Brownlie from the Royal Veterinary College and established under Defra's Animal Health and Welfare Strategy and Farm Health Planning initiatives for Great Britain.

As explained on the Defra website, this Government strategy sets out a vision to be realised by 2014 that includes three key aspirations for cattle farmers:

- "Our disease status is amongst the highest in the world, and we are able to trade our animals and animal products internationally.

- "Livestock keeping is part of a competitive British farming industry.

- "The costs of livestock health and welfare are appropriately balanced between industry and the taxpayer."

Mr Sketchley said the first of these could not be achieved without the eradication of BVD; the second could only ever be partially achieved while BVD was still present; and the third would have a major influence on how BVD eradication would be achieved.

On the latter point, he suggested three reasons why the cattle industry itself is required to take responsibility for the majority of eradication costs.

"BVD is not a zoonosis – a disease transmissible to humans – nor is it a notifiable disease, so there is no rationale for taxpayer funding.

"Moreover, it is an economically damaging disease, the control of which provides a financial payback to farmers, as farmers themselves confirm in the latest survey."

Both under the BVD Strategy Group and outside it, there are several BVD initiatives already running. The longest standing is in Orkney, as reported in



Phil Sketchley.

*Farmers Guardian* in March. Modelled on this, regional or county BVD eradication projects are running in East Anglia and Somerset, with more mooted for other areas, but not yet under way.

Phil Sketchley said one of the Strategy Group's functions is to pull together the results and experience from such groups

and use this information in the formulation of a national eradication programme.

"This will be easier said than done," he said. "It requires agreement among and commitment from all the parties involved. This includes representatives of beef and dairy farmers in England, Wales, Scotland and Northern Ireland, several industry organisations and the veterinary profession.

"But make no mistake, it will be done. By education and persuasion, the majority of cattle farmers will be converted to adopting a BVD control and eradication programme. Then, just like seat belts, it may be that legislation is passed to compel a reluctant minority to comply.

"But this is not something that can happen overnight. In Scandinavian countries, with whom we sometimes find ourselves compared, BVD eradication has been under way for between 10 and 20 years. Having

won the hearts and minds of a majority of farmers there, the introduction of legislation has their support in enforcing a small non-compliant minority to come into line for the greater good of the country's cattle industry."

He said, for now, the priority in the UK was to raise farmers' awareness of BVD and encourage them to take steps voluntarily to introduce a control strategy to their own farm.

"We need to convince farmers that eradication of BVD will not only improve productivity and animal welfare, but also the profitability of their dairy or beef enterprise."

■ NOAH represents the animal medicine industry and has worked closely with the Defra Farm Health Planning teams and the BVD Strategy Group to arrange collective input from manufacturers of animal medicines and vaccines, and assist in market analysis, technical advice and communications.

## It pays well to tackle BVD, say farmers themselves

BEEF suckler herds are £21 per cow per year better off as a result of using a BVD vaccine as part of a disease control plan – and, unusually, that figure has come from farmers themselves and not economists, vets or farm advisors.

Beef farmers were asked a multitude of questions relating to the disease in the BVD Awareness Survey 2007, sponsored by Pfizer Animal Health, manufacturers of PregSure BVD; the dairy herd part of the survey will be published in September.

Of farms taking part in the beef section of the survey, the average suckler herd was 94 cows, with 56 per cent using a BVD vaccine. This is markedly higher than the national average,

estimated to be around 30-40 per cent, according to Pfizer vet Carolyn Hogan.

"The most common advantage nominated by 47 per cent of farmers was stronger calves, less scour and less pneumonia," she said. "This was followed closely by better fertility, shorter calving interval and fewer barren cows.

"Next came improved all-round productivity, fewer/no abortions, then level pegging were eliminate BVD, mucosal disease and persistently infected animals and less worry/good insurance."

Among vaccine-users, the survey found that more than three-quarters had been vaccinating for three years

or more, while 9 per cent had just started, 7 per cent had been vaccinating for one year and 11 per cent, two years. Of all these, 78 per cent would not consider stopping for any reason. Among the other 22 per cent the prevailing condition required before they might consider this step was to be a closed BVD-free herd, with all neighbouring farms BVD-free too.

Despite more participants than average using BVD vaccination, the survey found an alarming underestimation of the disease's prevalence in the UK. Only 11 per cent answered correctly that BVD infection is present on more than 80 per cent of farms. Of the wrong answers, 35 per cent were fairly close while 54 per cent were wrong by

some margin, some even guessing that less than 2 per cent were infected.

"Perhaps a partial explanation of this might be that for 57 per cent of non-vaccinating farmers, their vet had not discussed BVD with them during the past 12 months," said Ms Hogan.

"Yet the door is open, with 38 per cent saying they would welcome the opportunity of such a discussion, and another 43 per cent saying 'maybe' they would.

"For farmers already with a vaccination and control programme, it can be argued that the national incidence of BVD infection is less relevant because they already have a defence mechanism in place."

Carolyn Hogan emphasised that, from Pfizer's point of view, BVD vaccination should be undertaken as part of a planned control programme under the supervision of each farm's own veterinary surgeon.

"In addition to vaccination, such a programme needs to identify persistently infected (PI) animals and eliminate them from the herd," she said.

"Quarantine of animals being brought onto the farm and good biosecurity across the whole farm are also essential.

"Clearly, the farmers already taking these steps recognise that they are worthwhile and make a profitable contribution to the financial performance of their suckler herds."