

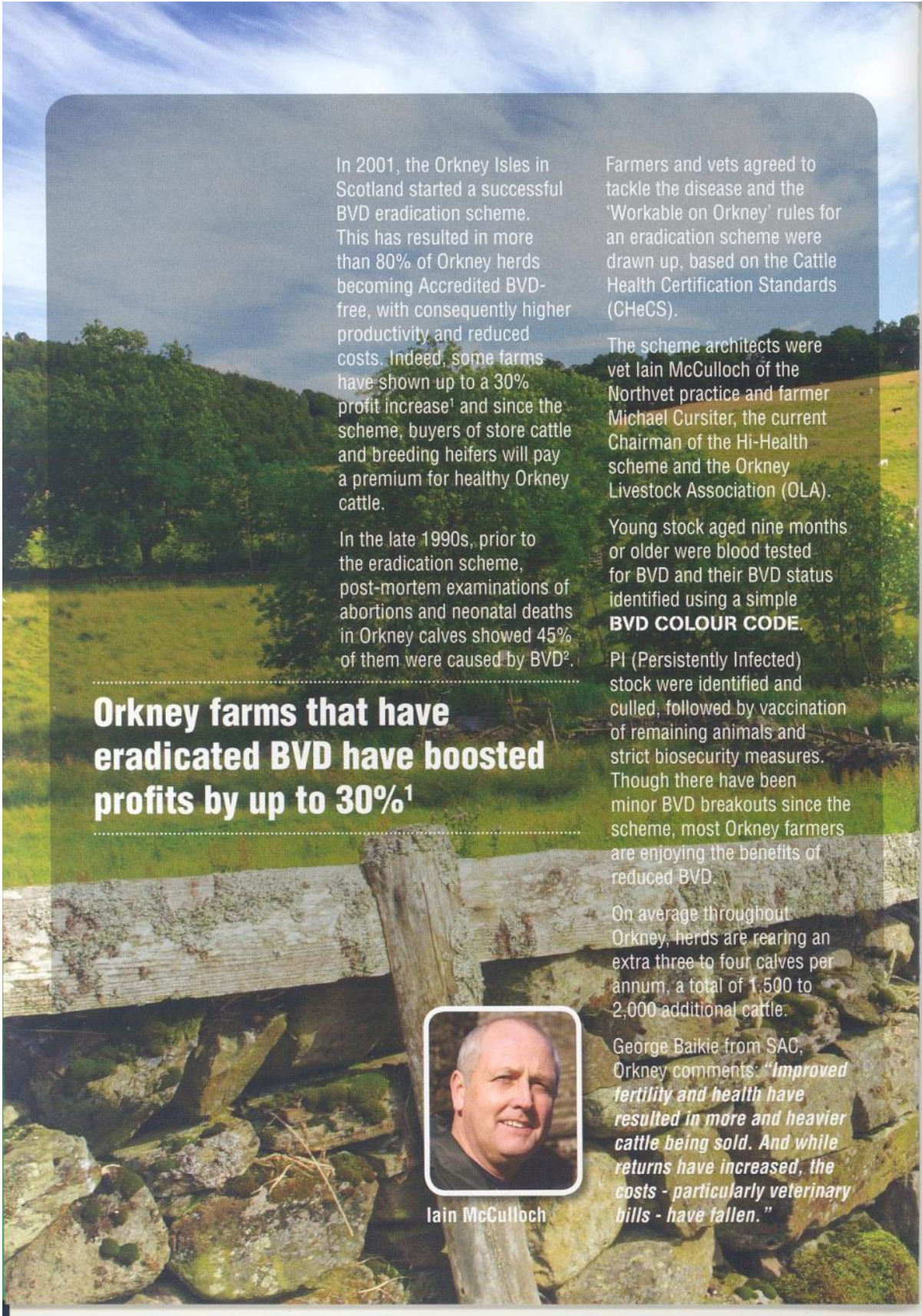
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 Pfizer Animal Health

PregSure® BVD

BVD virus eradication: Our progress, your opportunity





Orkney farms that have eradicated BVD have boosted profits by up to 30%¹

In 2001, the Orkney Isles in Scotland started a successful BVD eradication scheme. This has resulted in more than 80% of Orkney herds becoming Accredited BVD-free, with consequently higher productivity and reduced costs. Indeed, some farms have shown up to a 30% profit increase¹ and since the scheme, buyers of store cattle and breeding heifers will pay a premium for healthy Orkney cattle.

In the late 1990s, prior to the eradication scheme, post-mortem examinations of abortions and neonatal deaths in Orkney calves showed 45% of them were caused by BVD².

Farmers and vets agreed to tackle the disease and the 'Workable on Orkney' rules for an eradication scheme were drawn up, based on the Cattle Health Certification Standards (CHCS).

The scheme architects were vet Iain McCulloch of the Northvet practice and farmer Michael Cursiter, the current Chairman of the Hi-Health scheme and the Orkney Livestock Association (OLA).

Young stock aged nine months or older were blood tested for BVD and their BVD status identified using a simple **BVD COLOUR CODE**.

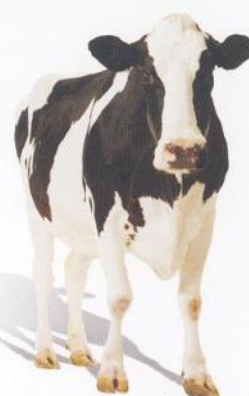
PI (Persistently Infected) stock were identified and culled, followed by vaccination of remaining animals and strict biosecurity measures. Though there have been minor BVD breakouts since the scheme, most Orkney farmers are enjoying the benefits of reduced BVD.

On average throughout Orkney, herds are rearing an extra three to four calves per annum, a total of 1,500 to 2,000 additional cattle.

George Baikie from SAC, Orkney comments: *"Improved fertility and health have resulted in more and heavier cattle being sold. And while returns have increased, the costs - particularly veterinary bills - have fallen."*



Iain McCulloch



BVD COLOUR CODE

WHITE: Animals not exposed to BVD, vulnerable to infection.

GREEN: Antibody positive, have been exposed to the BVD virus, developed immunity.

RED: Virus positive, Persistently Infected (PI) carrier of BVD, highly infectious, constantly shedding huge amounts of virus. Incurable!



New BVD control programmes throughout the UK

Following the success of the Orkney Islands BVD eradication programme, other regions in Britain have been setting up their own control schemes. Three are currently in operation – in East Anglia, Somerset and Scotland, with another being set up this winter in Rutland.

Scheme Update: East Anglia

Based primarily in Norfolk and Suffolk where cattle are well dispersed and have low density, the BVD eradication scheme has signed up 71 farms, with over a third of them already BVD-tested. The East Anglia scheme is headed by Professor Joe Brownlie of the Royal Veterinary College, who is one of Britain's leading authorities on BVD.

His team will be collecting data throughout the trial including the costs and benefits of the trial process and the secondary benefits of achieving BVD-free status.

Scheme Update: Somerset

Somerset is a densely-populated area for cattle, making effective biosecurity much harder than in other regions of the UK. BVD can be spread from one herd to another by direct contact between cattle, visitors to neighbouring farms and by sheep or deer.

This situation makes whole-herd eradication followed by vaccination mandatory for a successful outcome and local vets are working with the RVC on a three-year programme to completely eliminate PI (Persistently Infected) animals from herds.

The BVD vaccination programme is producing several benefits; since BVD acts as an immunosuppressor, infected animals become prone to other diseases such as pneumonia and TB. So respiratory diseases are monitored as well as the levels of mastitis and calf disease.

Abortions and infertility have decreased markedly as a result of the eradication/vaccination programme with some herds showing zero abortion levels.

Scheme Update: Rutland

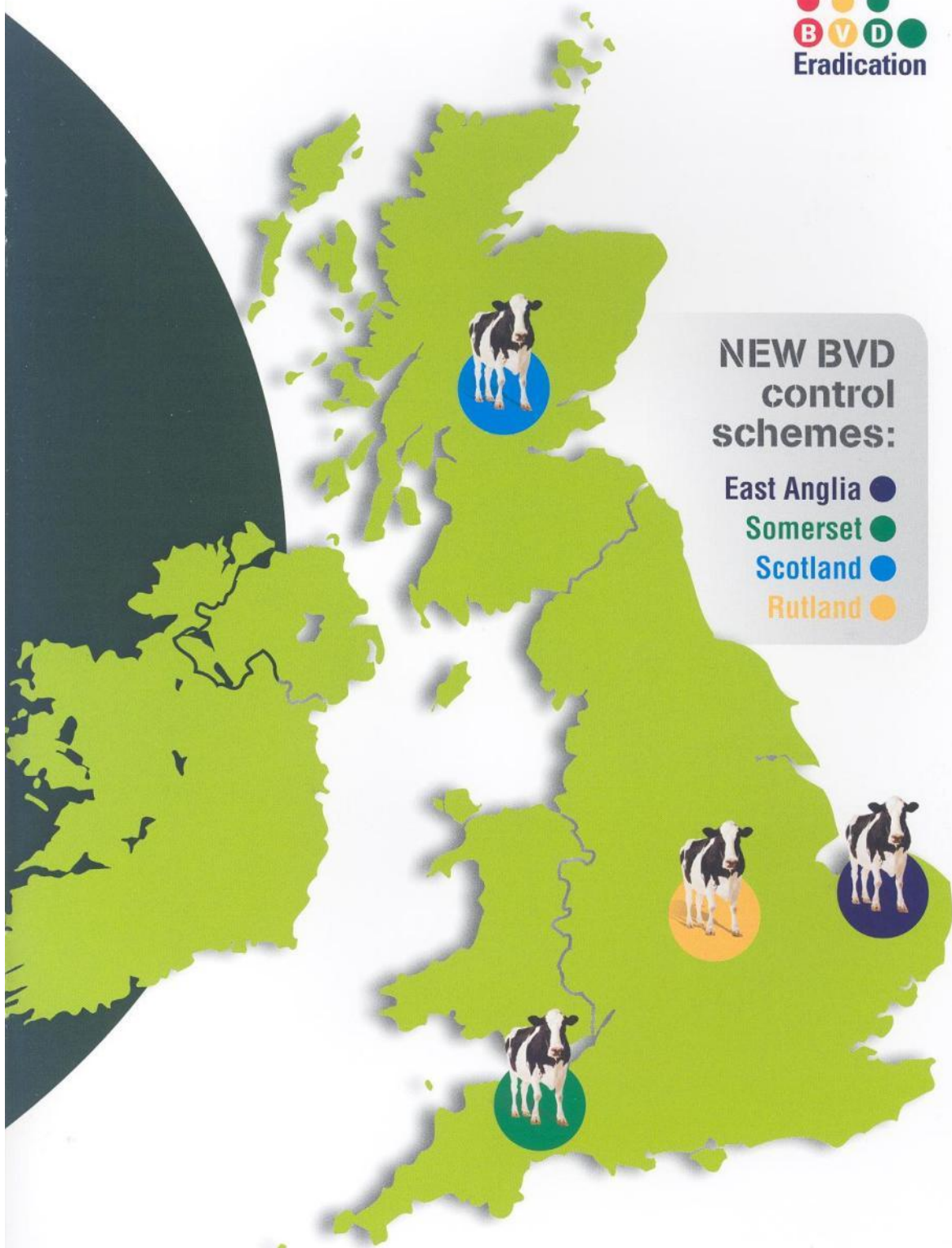
Rutland has set up the latest of the BVD control schemes and is currently recruiting farmers to join the programme of bulk milk and/or blood sampling to establish base BVD levels and identify PI animals.

Once the farmers join the scheme, they will be devising effective biosecurity measures and setting up regular reviews of the BVD load in their herds using the milk or blood sampling techniques recommended by the veterinary panel.

Vaccination is essential to maintain the immunity of cleared herds and the veterinary panel are currently recommending combined BVD and leptospirosis vaccination to keep costs and time to a minimum.

**NEW BVD
control
schemes:**

- East Anglia ●
- Somerset ●
- Scotland ●
- Rutland ●



How your area can set up its own scheme

Cooperation is the key

The cooperation of farmers and veterinary surgeons is essential for the success of any BVD control scheme; the pioneering Orkney scheme was started by meetings of farmers and vets that revealed a joint will and determination to end the major effects that BVD was having on the profitability of the Orkney cattle industry.

Orkney's scheme architects reflected this cooperative spirit; they were veterinary surgeon Iain McCulloch of the Northvet practice and farmer Michael Cursiter, the current Chairman of the Hi-Health scheme and the Orkney Livestock Association (OLA).

5 Easy Steps To Set Up

Step 1

Set up a farmer's and veterinary surgeon's committee with clearly defined regional responsibilities and a realistic time scale to achieve BVD control goals within the boundaries set.

Proper accreditation of BVD-free status needs to be arranged to ensure that the farmers gain the full advantages of their successful participation. Within CHeCS there are three programmes to suit the particular circumstances on each farm. Vet and farmer can discuss which scheme is most appropriate for each herd.

By setting out the benefits of BVD control, recruit as many livestock farmers as possible and ensure that they have access to veterinary support.

Step 2

Gain each participating herd's history of BVD by previous bulk milk or blood sampling records; some herds may already be BVD-free and should be maintained in that state.

Step 3

Farmers and vets establish and maintain biosecurity on all participating farms; the measures should be discussed at the Step One stage and need to be rigorously maintained to ensure that the effort involved in joining the scheme is not wasted and that existing BVD-free herds stay that way.

Step 4

A check test will establish whether BVD is present in the herd by blood sampling youngstock - ten animals from each separately managed group of 9-18 month old stock are sampled.

If they test positive for BVD antibodies, then BVD is on the farm and a testing strategy should be put in place to isolate the PI's who are spreading the disease.

If the youngstock are negative for BVD antibodies, then the disease is unlikely to be active on the farm and the next step towards BVD-free accreditation can be made.

Step 5

Identify and cull the PI animals from the herd; this will remove the source of BVD on the farm and should result in rapid improvements in reproduction, fertility and susceptibility to respiratory disease.

At this stage, whole-herd vaccination should be considered to stop BVD re-introducing itself - though vaccination can be done before all the PI's have been found and culled, the search for PI's is still necessary as even when vaccinated they will continue to shed virus and permanently challenge the vaccine's protection.

PI dams will also always give birth to PI calves, so to eradicate BVD, you must first eradicate any and all PI animals.



SUCKLER FARMERS COULD SAVE

£37 per cow per year³

DAIRY FARMERS COULD CUT COSTS

by £28 per cow per year⁴

FARMERS COULD SAVE

3-4 calves per 100 animals per year²

The benefits of BVD-free status

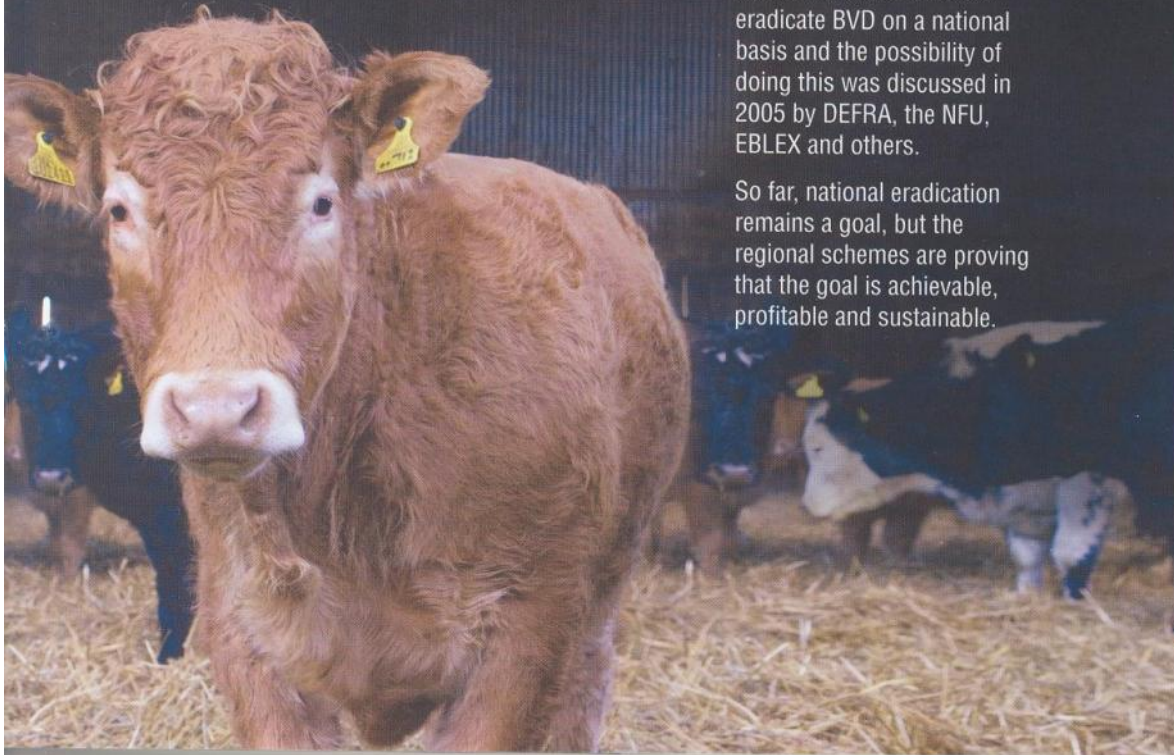
Removing BVD from herds could save farmers 3-4 calves per 100 animals² every year and a 200-cow dairy herd could cut costs by £28 per cow per year⁴.

Suckler herd farmers could save £37³ per cow per year – with other sources putting that figure as high as £50¹ – and accredited BVD-free animals can fetch higher prices at auction as the Orkney scheme has proved.

As the herds regain the lost resistance to respiratory and other diseases that BVD infection compromises, animals will do better and veterinary costs will reduce, even allowing for the costs of vaccination.

Professor Joe Brownlie is convinced that the UK can eradicate BVD on a national basis and the possibility of doing this was discussed in 2005 by DEFRA, the NFU, EBLEX and others.

So far, national eradication remains a goal, but the regional schemes are proving that the goal is achievable, profitable and sustainable.





BVD eradication scheme on Orkney: Pfizer shows vets and farmers the benefits

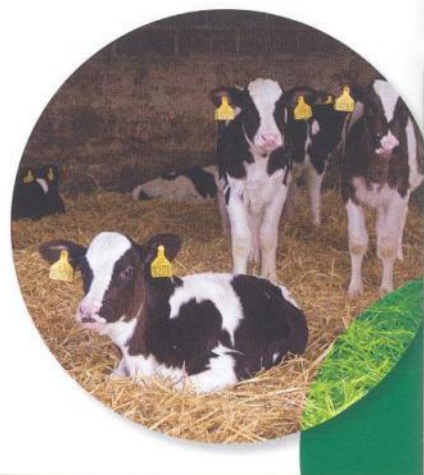
In 2007, Pfizer Animal Health took vets and farmers along to see the results of the Orkney BVD eradication scheme for themselves.

The changes since the late 1990s when the scheme was set up have been remarkable. The visitors to Orkney heard about some of the specific effects of BVD in the Orkney herds. For example, between 1994 and 1997, local farmer Michael Cursiter found BVD infection increased his medicine bills from £615 to £2609 and cut his calving rates from 96% to 78%. Now he vaccinates heifers against BVD before going to the bull.

"I was impressed with the way everybody was involved, the vets and farmers have worked together."

**Hattie Bertenshaw,
Davies & Johnson
Veterinary Practice,
Woodplumpton**

Pfizer Pfizer Animal Health





Extra calves, extra performance, extra money

The Pfizer party also heard about the positive benefits that eradication has brought. The Orkney scheme that combined culling of PI animals, comprehensive biosecurity measures and vaccination of all non PI cattle has resulted in a **£50 per cow margin** improvement¹, made up of £33 from the increased calving capacity and £17 from better overall performance.

Now Orkney herds are producing 3-4 extra calves per year; a total of some 1500-2000 cattle² - and those calves are using less medicine for scours and respiratory diseases and the herds are performing better. Orkney farmer William Marcus's Angus herd has achieved full BVD-free accreditation and he now commands **an average of £150 premium per breeding heifer at market**.

BVD-accredited bulls are also in high demand, as Karen Tait, OLA secretary and farmer says: "the general rule of thumb for a bull at Perth or Carlisle which does not have a certificate is why not?"

Vets in Orkney agree the benefits that eradication has brought: "We didn't realise how much trouble BVD caused until we were rid of it."

Other comments heard by the Pfizer party included:

"The scheme appears to be led by the OLA (Orkney Livestock Association) yet also driven by the farmers."

"The colour coding helped me to understand BVD better"

"It was a tremendous tonic to see and experience such a positive experience and atmosphere."

Perhaps one of the attending vets should have the last word:

"I know that a lot of farms in our area have BVD. The success and improvement in the Orkney herds thanks to controlling BVD has made me realise that something can be done and it's given me renewed enthusiasm to go out onto the farms in the practice and do something about it."

**Neil Roberts,
Dalehead Veterinary Group, Settle**





LICENSED
12 MONTHS
FOETAL
PROTECTION

PregSure® BVD **– an integral part of BVD control**



PregSure BVD is one of the vaccines used in the Orkney BVD eradication scheme and was used to replace a previous vaccine used in the herds that suffered a BVD breakdown.

PregSure BVD uses the latest technology to give powerful, fast-acting and long-lasting immunity to BVD virus⁵.

- Uses a Next Generation advanced adjuvant system – Procision-A™
- Mimics natural infection to create a stronger immune response
- Generates a rapid and long-lasting immune response⁵
- Licensed to provide a full 12 months foetal protection
- Licensed to reduce fertility losses due to BVD infection
- The only BVD vaccine to have a partner leptospirosis vaccine licensed to be administered at the same time
- Convenience of a simple, single whole herd annual booster at any time of year or stage of pregnancy

Year:
2009

Powerful Foetal Protection
year after year

PregSure® BVD

NEXT GENERATION PROTECTION

PregSure® BVD

Presentation

An inactivated BVDv type 1 vaccine containing cytopathic strain 5960 (to induce a GMT in guinea pigs of at least 5.6 log₂) and the adjuvant Procision-A™.

(1ml of Procision-A™ contains, Quil A 3.05mg, Cholesterol 3.05mg, Amphigen Base 0.076ml, Drakeol 5 (liquid paraffin) 0.228ml)

Uses

For the active immunisation of female cattle of breeding age to prevent BVDv type 1 transplacental infection and the birth of BVDv type 1 persistently infected calves. Laboratory scale investigations demonstrate that vaccination can reduce fertility losses due to BVDv type 1 infection in the early stages of gestation.

Dosage and administration

Dose: 2ml

Administration

Shake and aseptically administer by the subcutaneous route.

Vaccination Programme

Primary vaccination:

Two doses three weeks apart. To provide foetal protection from the first day of conception, the vaccination regime should be completed at least 14 days before breeding or insemination.

Booster vaccination:

Duration of immunity is 12 months following completion of the primary vaccination course. A single annual booster is recommended.

Contra-indications, warnings, etc

Do not vaccinate unhealthy animals. Following administration of the vaccine a mild, transient pyrexia lasting for up to 4 days may be observed, but is not associated with any clinical illness.

Most vaccinated animals will show detectable swellings (up to 20cm in diameter) at the injection site. These may be warm, firm and sensitive to palpation, but will resolve within 14 days, 20 days in exceptional cases. As part of the immune reaction following vaccination, inflammatory cell infiltration and/or fibrosis may occur in the dermal tissue at the injection site lasting for at least 14 days.

No information is available on the safety and efficacy from the concurrent use of this vaccine with any other product. It is therefore recommended not to mix with any other vaccine/immunological product.

Operator warning

To the user

This product contains mineral oil.

Accidental injection/self injection may result in severe pain and swelling, particularly if injected into a joint or finger, and in rare cases could result in the loss of the affected finger if prompt medical attention is not given. If you are accidentally injected with this product seek prompt medical advice even if only a very small amount is injected and take the package insert with you. If pain persists for more than 12 hours after medical examination, seek medical advice again.

To the doctor:

This product contains mineral oil. Even if small amounts have been injected, accidental injection with this oil-based product can cause intense swelling, which may, for example, result in ischaemic necrosis and even the loss of a digit. Expert, PROMPT, surgical attention is required and may necessitate early incision and irrigation of the injected area, especially where there is involvement of finger pulp or tendon.

Withdrawal periods

Zero days.

Pharmaceutical precautions

Store between +2°C and +8°C. Do not freeze. Once opened, use within 10 hours.

Disposal: Any unused product and empty vials should be disposed of safely using local procedures in application at the time of use.

For animal treatment only.

Keep out of reach of children.

Legal category

POM-V.

Package quantities

10 or 50ml (5 or 25 doses respectively) vial.

Further information

PregSure BVD also has a broad cross-neutralising ability against various current European strains of BVD type 1 virus as measured by virus neutralization *in vitro*. Cross-neutralisation at a lower level is also demonstrated to BVD type 2 strains. Clinical-efficacy to BVD type 2 strains has not been demonstrated.

Use of this vaccine in lactating animals and at any stage of pregnancy is safe. Immediately following vaccination, a transient reduction in milk yield may occur. The use of this vaccine during pregnancy has not shown any other effects than those listed.

No effects other than those already mentioned have been observed following an accidental administration of a double dose of vaccine. In repeated dosing studies when an additional third dose was given shortly after the recommended 2 doses primary vaccination course, increased magnitude injection site reactions were seen, particularly in pregnant animals.

Marketing authorisation number

Vm 00057/4230

References

1. p.c. George Baikie, SAC (March 2007)
2. p.c. Iain McCulloch, Northvet Practice (March 2007)
3. SAC MDC Data (2000)
4. Gunn G.J. *et al* (2004) *The Vet Journal* 167:143-149
5. Pfizer studies 9131C-50-03-230, 9131C-50-01-182

 **Pfizer Animal Health**

For further information please contact your veterinary surgeon or
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