

Facing senseless slaughter: the fate of Wales' badgers

This report from Badger Trust Cymru reveals that Wales has the worst bovine TB problem in the UK. But it also exposes the National Assembly for Wales' proposed badger cull as a senseless *quid pro quo* for farmers, weakly disguised as science. We show that Northern Ireland had a similar rate of bovine TB to Wales just four years ago, but has virtually halved that without killing a single badger. In contrast, over the same period, the Republic of Ireland has exterminated thousands of badgers and failed to dent its massive bovine TB problem, even though badgers are now virtually extinct in livestock areas. Elin Jones, the Minister for Rural Affairs, must not make the same mistake by killing badgers in Wales.

FACT: Every major increase in bovine TB in Wales can be linked to the restocking of cattle and buying-in cattle to increase herd size.

(Table 2, page 3)

TB in Wales: a summary

Wales currently has the worst rate of TB infection in cattle in the UK. The rate is best measured by the number of cattle, per thousand tested, that are found with TB. This is a better measure of the situation than the number of infected cattle or herds, which is influenced by herd density rather than disease frequency.

Farming unions blame badgers for the bovine TB problem in Welsh cattle. But if badgers were the true cause, the situation would be just as bad in Northern Ireland where no badger culling is taking place.

Yet Badger Trust Cymru's data shows that Northern Ireland has dramatically improved its TB situation in just four years without killing a single badger. In fact, the situation in Northern Ireland is now better than in both Wales and England, whereas it was once the worst in Europe.

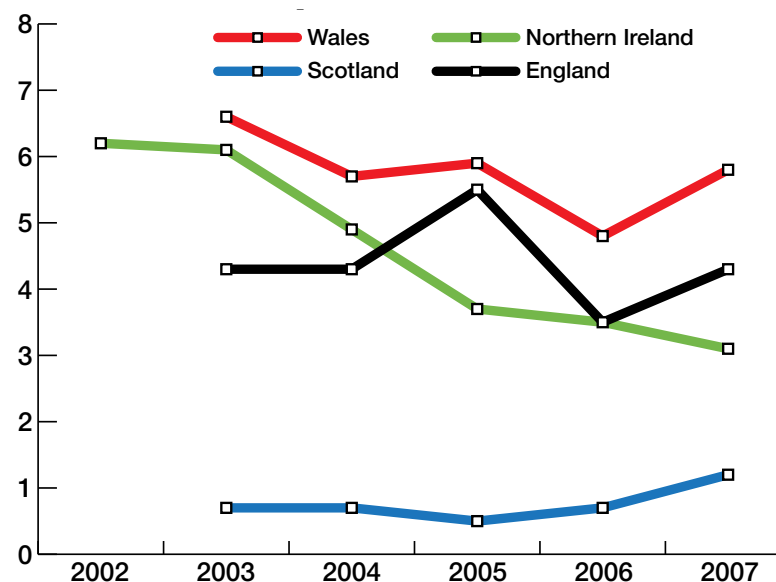
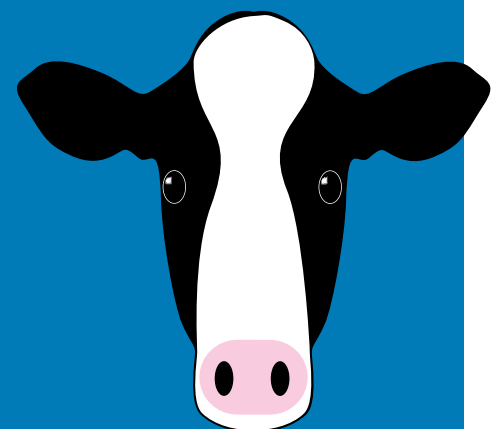


Figure 1: TB positive cattle per 1,000 cattle tested, 2002-2007



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‘It would be political naivety of the highest order to replicate the Republic of Ireland’s failed badger culling policy, yet that is exactly what the National Assembly for Wales is proposing.’

Table 1: TB positive cattle per 1,000 cattle tested, 2002-2007

| Country | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|------------------|------|------|------|------|------|------|
| England | - | 4.3 | 4.3 | 5.5 | 3.5 | 4.3 |
| Northern Ireland | 6.2 | 6.1 | 4.9 | 3.7 | 3.5 | 3.1 |
| Scotland | - | 0.7 | 0.7 | 0.5 | 0.7 | 1.2 |
| Wales | - | 6.6 | 5.7 | 5.9 | 4.8 | 5.8 |

The threat to Welsh badgers

Elin Jones AM, the Welsh Assembly Government’s Minister for Rural Affairs, is currently considering how best to address Wales’ growing bovine TB problem. If she accepts the Welsh Assembly’s call for badger culling, the outlook for badgers is not at all promising.

On 22 January 2008, the National Assembly for Wales’ Rural Development Sub-Committee published its report on bovine TB. The Sub-Committee had been presented with evidence from ten years’ worth of badger culling research in England. Its authors, the Independent Scientific Group (ISG), concluded that culling could make no meaningful contribution to bovine TB control. Their research had been published in international, peer-reviewed journals and the authors had analysed, in detail, every possible culling option before reaching their conclusion.

None of the pro-cull lobbyists who gave evidence to the Sub-Committee provided robust statistical, economic or scientific analysis to contradict the ISG: they simply disagreed with it.

Yet the Sub-Committee failed to rule out badger culling. Unable to contest the ISG’s advice with any evidence, the Assembly Members instead said there was not enough evidence to say whether badger culling was a good idea or not.

This left badgers exposed as scapegoats for a problem that is entirely the consequence of current farming practices.

The Sub-Committee recommended a policy of badger culling ‘to provide further evidence on the effects on the spread of TB of culling wildlife in an area with hard boundaries’.

This was a vague attempt to disguise a political *quid pro quo* for farming unions as an act of valid scientific research. In fact, it is nothing of the kind. The Randomised Badger Culling Trial in England took ten years, cost at least £50 million, was statistically robust and provides every possible piece of scientific evidence that might be obtained by killing badgers. Killing badgers in Wales will make no contribution to the body of scientific knowledge that already exists.

Indeed, the Sub-Committee

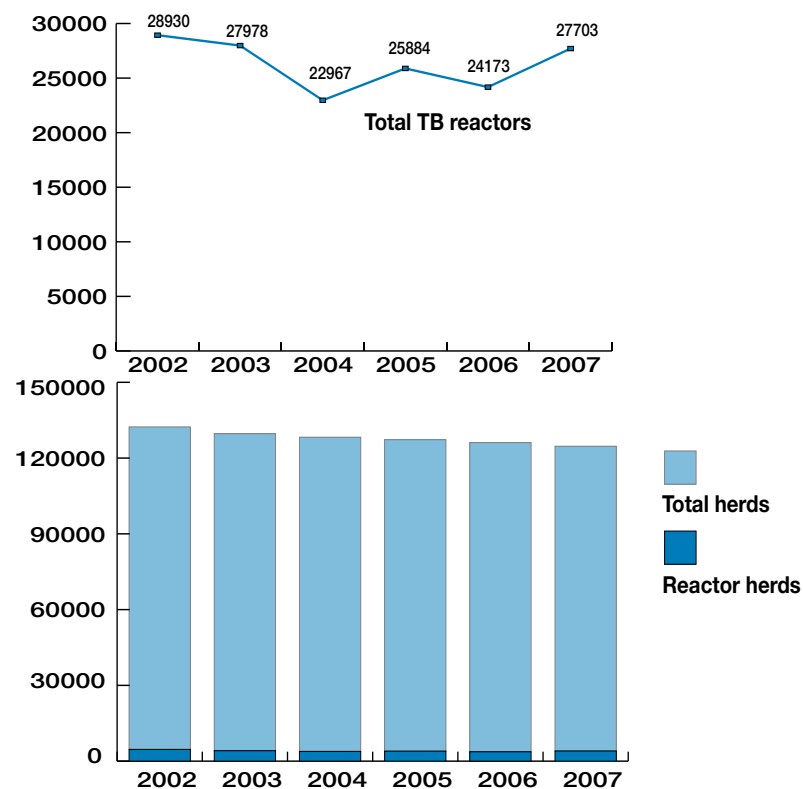


Figure 2: TB incidence in the Republic of Ireland 2002-2007

did not even bother to state what questions it thought more badger killing might answer.

Nevertheless, its spectacularly naive proposal was accepted by the National Assembly for Wales in February. Only Lorraine Barrett AM, to her credit, objected to the proposal. The remainder of the small number of AMs who were present appeared to observers from Badger Trust Cymru to have little idea of

what they were agreeing to. It seems extraordinary that elected members can so easily nod through a proposal that will achieve nothing and cost Welsh tax payers millions.

Badger Trust Cymru is extremely concerned that the Welsh Assembly Government is sliding towards a badger cull despite comprehensive evidence, gathered in England, that killing badgers cannot meaningfully control bovine TB.

Why culling will not work

The Rural Development Sub-Committee argued that all the available evidence should be considered in formulating a badger culling strategy, ‘including the Four Areas Trial in Ireland’.

This betrays the alarming degree of ignorance within the Sub-Committee. Ireland’s so-called Four Areas Trial involved killing badgers in four areas but without a valid scientific control. A control is essential to validate any scientific research: it is an area where no action is taken (in this case, badger culling), so that the results of the experiment (badger culling) can be measured precisely.

Yet in the Republic of Ireland badgers were killed in the supposed control areas too, in such a way that it is likely to have increased bovine TB by disturbing badger populations and encouraging them to roam more widely.

Moreover, Badger Trust Cymru can now show that **the Republic of Ireland’s intensive programme of badger culling has had no beneficial effect whatsoever.**

Every night, the Republic of Ireland sets 6,000 snares across 30% of Ireland’s agricultural land where cattle are concentrated^[3].

According to Professor Simon More from the Republic of Ireland’s Centre for Veterinary Epidemiology and Risk Analysis, the spread of TB by cattle is ‘relatively uncommon

under Irish conditions’^[1].

You would therefore expect that the relentless extermination of badgers since 2002^[2] would, by now, have made a marked impact on the disease. It has not.

Badger culling has been going on in one form or another for 16 years. A simple observational study just published by More and his colleagues^[4] reveals that this protracted killing has only reduced bovine TB by 22%. Yet they acknowledge that even this reduction could be an over-estimate, due to the immense weaknesses in their data.

And when the data is examined in detail, it is easy to see why. The Irish government was frequently catching less than one infected badger in areas in excess of 200 square kilometres. How could such a tiny number of infected (and not necessarily infectious) badgers possibly be to blame for so much TB in cattle? Clearly, this is a cattle problem for which badgers are the tragic scapegoats.

This is confirmed beyond all doubt by the latest TB data from the Republic of Ireland. In 2002, badger culling was intensified. But our data (Figure 2) show that the number of TB reactors has fluctuated wildly despite the badger culling. Last year, it rocketed by 13%.

Over the intensive culling period, the proportion of infected herds has remained constant. In 2002, 3.64% of herds were infected. In 2007,

3.34% of herds were infected.

Over the same period, Ireland’s national herd has fallen by 200,000 head^[5] and the number of herds by 7,000. Clearly, then, Ireland’s repugnant and brutish policy of badger extermination has utterly failed to control or eradicate bovine TB.

It would be political naivety of the highest order to replicate the Republic of Ireland’s failed badger culling policy, yet that is exactly what the National Assembly for Wales is proposing.

Farming is to blame

If badgers were really to blame for Wales’ bovine TB problem, there would presumably be some clear link to changes in the badger population and changes in the incidence of bovine TB. There is not.

As Table 2 shows, bovine TB had actually stabilised in 2000, prior to the outbreak of foot and mouth disease in 2001. Since then, the number of reactors has fluctuated dramatically but increased steadily.

After foot and mouth disease, bovine TB went through the roof. The increase of 144% between 2001 and 2002 is immense. But in 2001 foot and mouth restrictions greatly reduced the number of TB tests, so the colossal increase of 177% between 2000 and 2002 is more accurate.

This increase occurred because the Government caved into farming

Table 2: TB in Wales 1997-2006

| Year | TB reactors | % increase on previous year |
|-------------------|-------------|-----------------------------|
| 1997 | 669 | |
| 1998 | 1,046 | 56% |
| 1999 | 1,359 | 30% |
| 2000 | 1,399 | 3% |
| 2001 | 2,074 | 48% |
| 2002 ¹ | 5,060 | 144% |
| 2003 | 5,734 | 13% |
| 2004 | 5,515 | -4% |
| 2005 ² | 6,777 | 23% |
| 2006 | 6,040 | -11% |
| 2007 ³ | 7,171 | 19% |

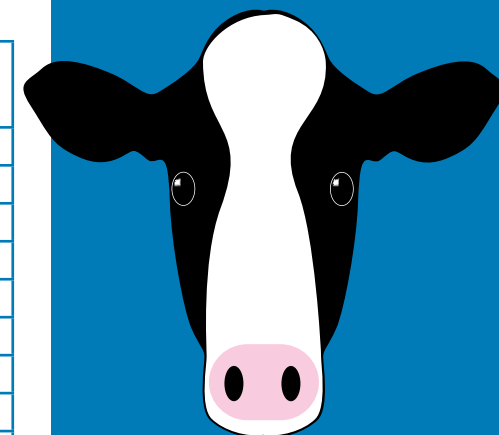
1. This 144% increase followed restocking after foot and mouth disease in 2001. But there were fewer tests during FMD so the increase of 177% between 2000 and 2002 is more accurate;

2. This 23% increase follows growth in the Welsh national dairy herd at a time when the UK national dairy herd was shrinking. The growth included livestock bought in from TB hotspots in SW England;

3. This 19% increase followed an 11% increase in the average dairy herd size in Wales between 2005-6, again fuelled by livestock from SW England.

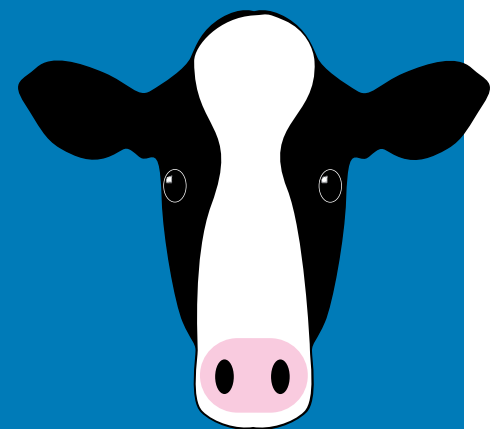
union pressure and allowed farmers to move untested cattle all over the country. This spectacularly stupid concession has cost tax payers millions in compensation payments to farmers who bought the disease onto their own farms. The NFU claimed the decision by the Government as a ‘victory’.

Badger populations did not



FACT: Since 2002, the most intensive badger culling ever seen in the Republic of Ireland has failed to make any dent in the Republic’s colossal bovine TB problem.

(p.3, Box 2)



FACT: Bovine TB in Wales increased by 177% between 2000 and 2002 when farmers restocked with TB-infected cattle after foot and mouth disease. It cost Welsh tax payers millions.

(p.3., col.3)

increase by 177% at that time. Nor did they increase by 19% between 2006 and 2007.

The harsh reality is that Wales' bovine TB problem can be easily traced to cattle movements and farming practices.

There is a clear and known correlation between larger herd sizes and an increased risk of bovine TB.

UK Government data^[9] shows that the size of the national dairy herd in the UK continued its long decline, falling from 2,227,000 cattle in 2002 to 2,063,000 in 2005 (a fall of 164,000 cattle). But Wales bucked that trend. Rather than declining, the national dairy breeding herd actually grew by 3,700 cattle between 2002 and 2005. The following year, 2006, bovine TB had jumped by a massive 23%. This was because farmers bought in cattle from TB hotspots in SW England.

There is more damning evidence of Welsh farmers' own role in the spread of bovine TB. According to the Milk Development Council^[10], between 2005 and 2006 the average dairy herd in the UK increased in size by 3%. But whilst English dairy herd sizes only rose by 1% and Northern Irish herds by 6%, in Wales the average dairy herd size rocketed by 11% between 2005 and 2006. That extremely rapid growth could only be achieved by buying in more stock.

Some of that growth was achieved by buying up livestock from farmers who were selling up in Wales: the

Box 1: Advice to veterinary staff in Northern Ireland ^[6]

'There is significant movement of cattle in the province, both between ("inter-herd") and within ("intra-herd") herds. A 1999 study of 1,500 cattle found that the average number of lifetime moves between herds was 5, while in some animals it exceeded 12. 71% of the sample cattle moved through a market at least once in their lifetime while 11% passed through 3 or more times. Most movement occurred at 2 distinct ages: within the first year, often as young calves, and at 1.5 to 2.5 years, most likely as near-finished beef, pregnant heifers or freshly-calved young cows.

'Intra-herd movement is significant due to small farm sizes and

consequent dependence on rented pasture for grazing cattle. This informal movement, between the home-farm and separate holdings or rented pasture, is difficult to quantify or control as licences are only required to cover movement in or out of the herd.

'Farms in the worst affected area (southern Armagh) tend to be smaller than elsewhere, with a greater concentration of suckler herds and a higher use of rented grazing.

'There is also some evidence of unauthorised movement of cattle and interference with identification and tests etc. in this region, which may also be a contributing factor.'

number of Welsh dairy producers fell by 6% in that period. But Badger Trust Cymru has been told by informed sources that much of the growth was achieved by importing cattle from South West England where the number of dairy producers also fell by 6% over the same period.

At the time, there was no pre-movement testing. Within the year, bovine TB had risen by 19%.

Scientific evidence has consistently shown that moving cattle and buying cattle in are the greatest risk factors for bovine TB. And as our data in Tables 1 and 2 shows quite clearly, bovine TB rose sharply after herd

sizes increased or when restocking occurred.

There is also strong evidence that Wales has a high proportion of hidden, infected cattle compared to England and Scotland. The gamma interferon blood test for TB is capable of identifying cattle in both the early and advanced stages of TB infection, whereas the skin test is likely to miss them.

Recent data^[11] show that of skin test negative cattle in England and Scotland, 7% and 5% respectively were positive when tested with gamma interferon. Yet in Wales, the rate was twice as high as in England,

at a staggering 14%. This strongly suggests that a large proportion of cattle in Wales are in the early stages of infection – something that is very likely following the recent import of infected cattle from SW England.

It is too painful for the farming unions to admit that the high level of bovine TB in Wales is due not to badgers but to farming practices.

But what can be done? Badger Trust Cymru believes that the answer can be found in Northern Ireland.

Northern Ireland's steady progress

Until recently, Northern Ireland had the worst bovine TB incidence anywhere in Europe. As in Great Britain, this peaked in the wake of the foot and mouth epidemic in 2001, when the spread of disease within herds led to a dramatic escalation in incidence.

But since 2002, Northern Ireland has virtually halved the number of TB reactors and the decline in infected herds continues.

As shown in Figure 1, the number of reactor cattle per thousand tested was 6.19 in 2002 but had fallen to 3.14 in the first 11 months of 2007. The incidence of infected herds fell from 9.93% to 5.23% over the same period.

This is still too high, but it compares well with the Republic of Ireland where the current herd incidence of 5.74% in East Offaly – the infamous badger culling area – is

Box 2: Overdue tests in Great Britain

[See www.defra.gov.uk/animalh/tb/stats/latest.htm]

In Great Britain, 4,381 herds were overdue for their test at the end of November 2007. As the table below shows, there appears to be a direct correlation between the number of herds overdue for a TB test and the proportion of TB infection in the region / country. This may be because missing a TB test allows infection to spread more widely both within the herd and to neighbouring herds. In contrast, Northern Ireland enforcement reduced its overdue herds by 90% in just one year.

| Region/country | % herds overdue | % herds under restriction |
|------------------|-----------------|---------------------------|
| Scotland | 1.60% | 1.78% |
| Northern England | 3.05% | 4.13% |
| Eastern England | 3.93% | 5.38% |
| Wales | 7.97% | 14.54% |
| West England | 8.25% | 15.47% |

regarded by Ireland's perverse farming press as 'very respectable'^[5].

The Rural Development Sub-Committee disparagingly states that TB in Northern Ireland has 'only reduced to pre Foot and Mouth outbreak levels', as though this was not significant.

In fact, it is a huge reduction and substantially beyond anything achieved in Wales or in England.

Moreover, the Committee has recognised that Northern Ireland has virtually halved its TB problem through better testing and monitoring of the disease:

- 'The ability of farmers, vets and officials to access the information on individual animals in real time appears

to have contributed greatly to identifying the type and location of the disease quickly and putting in measures to prevent its spread.'

- 'The evidence we heard from Northern Ireland led us to the opinion that a regime of annual testing, funded by the government could significantly contribute to the control of TB.'
- 'We also believe that, as in Northern Ireland, there have to be stringent controls to ensure that the annual testing regime is adhered to throughout the industry.'

Under the Freedom of Information

Act, Badger Trust Cymru and the Badger Trust have secured a wide range of information about Northern Ireland's TB control strategy:

Underlying policy trends in Northern Ireland

Bovine TB policy in Northern Ireland is outlined in detail in a 255-page guide for staff^[6]. Although not significantly updated since around 2002, it makes refreshing reading when compared with the guidance available to Animal Health staff in Great Britain. (As the Badger Trust reported in 2007, key parts of GB guidance to state vets had not been updated for a decade.)

Most importantly, staff in Northern Ireland acknowledge that whilst TB eradication is an objective, 'a range of factors ... mitigate against achieving eradication in the immediate future'.

This honest stance in Northern Ireland contrasts with Wales, where the Assembly talks about TB eradication as though it is actually realistic.

Badgers are of course included in Northern Ireland's list of challenges, which was written before the results of the Randomised Badger Culling Trial in England had been published. (The authors of this trial concluded that badger culling could make no meaningful contribution towards TB control).

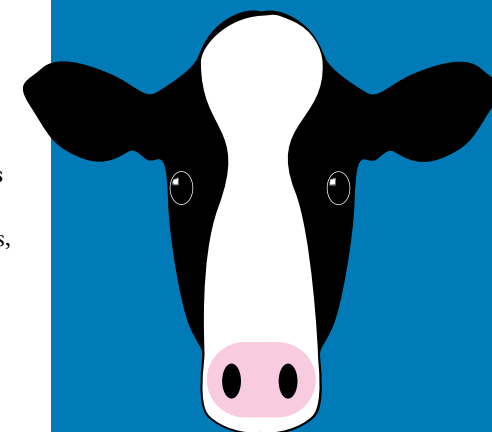
But the Northern Ireland document also makes a very

important acknowledgement, recognising that there is 'enormous potential for farm to farm spread' exacerbated by a 'high rate of cattle movements' and 'limitations associated with the [TB] test and its execution'. Some of the mitigating factors, including animal movements, are outlined in Box 1.

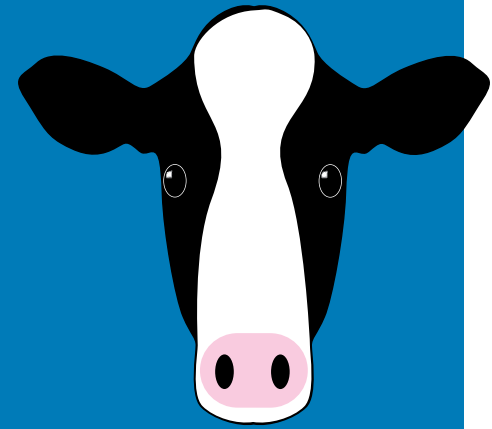
Sophisticated surveillance

The most significant drop in bovine TB in Northern Ireland came after November 2004. Northern Ireland introduced *and enforced* tough restrictions for herds that missed their TB test. The number of herds overdue for their TB test fell from 3,306 in October 2004 to just 358 in October 2005, 'due in part to herd keepers testing more quickly'. This contrasts with the poor enforcement of overdue herd tests in Great Britain. As Box 2 shows, there is an extraordinarily strong correlation between the proportion of herds overdue for a TB test and the proportion of bovine TB in that area.

The testing regime in Northern Ireland is supported by a sophisticated Animal and Public Health Information System (APHIS) – a database-driven IT system capable of tracking and monitoring the status of individual animals as well as herds. This, in turn, supports a carefully structured programme of risk analysis, in which each TB incident is treated as an epidemiological event and investigated thoroughly.



'The honest stance in Northern Ireland contrasts with Wales, where the Assembly talks about TB eradication as though it is actually realistic.'



FACT: Between July and October 2007, 8.2% of skin test negative cattle were found to be positive to bovine TB by the gamma interferon test in Northern Ireland.

(p.6., col.2)

Thanks to APHIS, Northern Ireland's approach to the disease is far more sophisticated than that in Great Britain in a number of ways:

- **Movement restrictions are imposed on individual animals considered more likely to be infected.** In addition to several classes of restricted herds, there are also different classes for individual animals. This can be particularly important with, for example, 'animals of suspect identity';
- **Careful tracing of animals.** Around 9% of tracings back to originating herds result in the identification of TB reactors;
- **Enforcement of cleansing and disinfection.** The advice on the cleansing and disinfection of farm premises is very detailed. Moreover, cattle must not use the facilities and the herd may not be derestricted until an inspection of the cleansing and disinfection has been completed;
- **Mapping breakdown herds.** This detailed process includes mapping all land associated with the herd and identifying other herds within 1km of that land;
- **Associating herds.** Rather than just focusing on the single, infected herd, all 'associated' herds are combined to create a single 'epidemiological unit' (Box 3). This improves disease control, but is not perfect. As DARDNI warns staff: 'DARD

Box 3: 'Associating' different herds

Different herds are 'associated' into the same epidemiological unit for a variety of reasons:

- Shared grazing;
- Shared housing;
- Shared testing and/or handling facilities;
- Repeated unlicensed or non-notified movement of animals between the herds;
- Documents issued to one herd but used by another herd keeper.

In contrast, data is not gathered for epidemiological purposes in Great Britain.

cannot insist associated herds be tested by the same veterinary practice or indeed be tested at the same time. Some unscrupulous herd keepers may take advantage of this fact and systematically move animals between associated herds between tests'.

Better testing

Northern Ireland has implemented a very structured, risk-based approach to herd testing. For example, herds that have recently had TB restrictions lifted are not ignored for a year. Instead, a further test is implemented between four and six months after restrictions are lifted, whether or not

disease had been confirmed at the time of restriction.

Similarly, herds that are being sold up and dispersed are subject to a TB test – something that has only recently been implemented in Britain as a result of pre-movement testing.

Northern Ireland has been using the gamma interferon blood test for bovine TB following a period of careful trials. Between July and October 2007, on average 8.2% of cattle that were negative to the traditional skin test were found to be positive by the gamma interferon test.

Although in some herds no additional animals were found by gamma interferon, in ten per cent of cases between 20 and 33 per cent of cattle were found to be positive, indicating a huge reservoir of concealed infection in those herds. Significantly, a massive 47% of animals that were deemed 'inconclusive' by the skin test were indeed positive when tested with gamma interferon. In the past, these animals might well have been left in the herd.

Enforcement

Another feature of TB control in Northern Ireland has been the establishment of the Central Enforcement Team (CET) in 2003, 'to handle more challenging and complex investigations and prosecutions, and to respond to the increased demands and expectations'.

This followed a report recommending a 'more proactive and higher profile approach to the prevention, detection and punishment of illegal activities in relation to animal health and animal movement violations'.

The primary focus is on the enforcement of Identification, Registration and Movement controls rather than TB directly, on the basis that 'this in turn underpins the traceability (and reputation) of Northern Ireland's livestock and ultimately the meat produced, providing for animal disease control'.

Between 1 April 2006 and 31 March 2007, 31 persons were convicted in court (including one person convicted twice) with fines totalling £33,560 and three custodial sentences (suspended). The largest single fine, totalling £6,000, was for failure to present animals for brucellosis and tuberculosis testing.

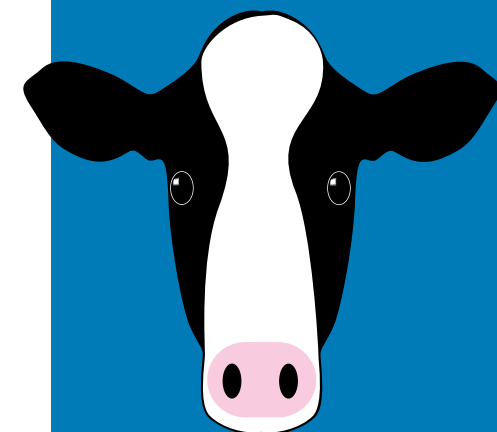
Conclusion

This report makes it abundantly clear that badger culling has failed to control or eradicate bovine TB in the Republic of Ireland. Yet effective cattle-based measures have virtually halved the incidence in Northern Ireland over the same period and the downward trend continues.

Despite this, the Welsh Assembly is sleep-walking into a badger cull on the unsupported premise that, by killing badgers, it will be able to eradicate bovine TB. Elin Jones must not make this disastrous mistake.

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