TB and those culling trials – the ISG final report.

After spending the most depressing day for many years listening to the full findings of the so called Independent Scientific Group (ISG) on the culling trials and TB problem in cattle, just how badly the trials had been carried out started to dawn on me. I had been working in the Putford / Holsworthy area at the time and talking with farmers and seeing what they were reporting made me realise that the trapping was going badly. But to listen to the slick ISG presentation describing these trials as the "only robust scientific data on which policy can be formulated" you would have thought they had been conducted in an impeccable manner. We were told culling badgers did not work and whilst it could result in modest reductions in numbers of cattle herd outbreaks in the culled areas, in the surrounding areas a rise in outbreaks was found as a result of infected badgers dispersing. This they claimed was an inevitable effect and an insuperable problem of culling. But what we were being told didn't add up. You were left wondering just how robust was this science?

The ISG's report is some 280 pages long and most of the data they have used on which to base their conclusions derives from the Randomised Badger Culling Trials. But there were huge problems with these trials. DEFRA Wildlife staff were tasked with trying to catch the badgers in cage traps yet trapping was continued for only an average of 8 days per annum, of the 15,666 traps set, 8,981 (57%) were tampered with and 1,827 (12%) were stolen and trapping was carried out when least likely to be effective during November to January in 16 of the total of 51 culls. Indeed one of the DEFRA trapping managers was so concerned about the poor trapping efficiency and procedural interference by the ISG that he submitted a written submission to that effect to the EFRA Select Comittee, 2006. All these problems as well as landowner refusal to participate added up to a disastrously low culling rate confirmed by DEFRA of from 20% to 60%. This means from 80% to 40% of infected badgers were dispersed to spread their infection making this more a study in dispersal of TB rather than a culling trial to control it. However, in a vigorous defence the ISG assert they removed from 32% to 77% !

But in all other trials in this country (Thornbury, Avon; Steeeple Leaze,Dorset and Hartland, Devon) and in the Republic of Ireland (East Offaly and the Four Counties) culling success has been over 80%. In the trials using gassing in the mid 70's, 100% removal was achieved resulting in complete cessation of TB cases over 10 years before other infected badgers moved in to start the problem again (Thornbury) and 7 years in the other (Steeple Leaze). At the latter the farming group switched to arable after that time.

Culling efficiency is everything when dealing with a wildlife reservoir host such as the badger which is organised into hierarchical social groups. Due to the confined air space in the sett, mutual grooming, communal sleeping and the gregarious nature of badgers, once there is a diseased badger in the sett all inmates will become infected. Most infections remain in a dormant phase with

maybe only one or two developing progressive disease straight away. But the dormant cases may break down and develop disease as a result of stress caused by malnutrition, intercurrent diseases or social disruption. This is how poor culling approaches spread disease. So culling must always be aimed at complete removal of all the social group or sett occupants.
When the trials were set up there were to be three areas each of 100 sq.Km. One was to be a no action area, acting as a control, whilst reactive culling was to be carried out the second as and when outbreaks occurred. In the third all the badgers were to be culled to see whether that halted outbreaks in the cattle, the proactive cull area. But in this last area the ISG decided not to cull out the badgers but rather to reduce the population and keep it "suppressed" throughout the trial. Surely this was a certain formula for disrupting and dispersing social groups? On studying the trial data it was apparent that 5 of the first culls in these 10 areas were carried out in the Winter (4 in Dec/Jan and 1 in Nov). It is well known that Winter is the least successful time of the year for trapping thus giving worrying doubts as to what the ISG were attempting to do ?

Consciously choosing such a course of action ensured this first cull removed minimal numbers of badgers and maximised social disruption and subsequent dispersal. At site B, Putford, N Devon the second cull was also in the Winter exacerbating the disruption. Overall 16 of the 51 culls were conducted at this time. Were they actually trying to turn this into a study of the effects of social disruption and dispersal in the spread of TB ?

We have long known that poor culling rates can spread infection and the initial cull must always attempt to maximise the removal of as many sett inmates as possible to avert this problem.

The last large cull, using the same cage trapping method as used in the RBCT, was at Hartland, N Devon, in 1984 and resulted in a fall in confirmed herd outbreaks of TB in cattle from 15% of herds to 4% in 1985. Thereafter annual incidence declined and held at around 1%. In excess of 80% to almost 90% of badgers were removed which required protracted trapping efforts in some of the area, sometimes for about three months. No evidence of significant dispersal of infected badgers was found here.

However, waiting for badgers to emerge at dusk and chance catching them using traps or shooting them makes the likelihood of complete removal of social groups poor as well as logistically hugely more difficult. And the one unequivocal finding from the ISG is that if culling is not done completely disruption of badger groups and their dispersal will result.

Since badgers live in underground tunnel systems the obvious approach is to try and dispatch them whilst still asleep underground, during the working day, by a toxic gas. Carbon monoxide mixed with dioxide from petrol exhaust fumes would seem the obvious choice but DEFRA have only recently started to test this approach and the trials and licensing of the method seem almost a year away. Whether, in the light of the ISG's report they will continue with this

work is debateable. Cyanide had been used previously but whilst very effective there were concerns about humaneness and obviously other connotations to its use. But it is only the gassing approach that has resulted in a certain and complete dispatch of all the sett inmates.

The culling method is crucial in eliminating infected groups and stopping spread to other badger groups and eventually cattle and the several other species that may pick infection. To date this includes deer, alpacas, lamas, sheep, pigs, cats, ferrets and a dog. Infection of man is an accident waiting to happen.
In the MAFF annual report of 1995 the Chief Veterinary Officer stated that 90% of outbreaks were considered due to infected badgers and this was also affirmed by MAFF's Senior TB Epidemiologist. Indeed, in the two gassing trial areas the complete cessation of TB in cattle following removal of the badgers indicated that they were the sole source of infection. Thus there and throughout the areas where TB infection is endemic in badgers cattle have been acting as sentinels of active disease in the badger But the ISG say they have been unable to quantify the role of badgers in cattle outbreaks although they do admit they can be a source of infection for cattle. However, they consider that cattle to cattle transmission is greatly more important !

Test, test and test again and then use the blood test as well. This is the only way forward according to the ISG. They consider there is a huge reservoir of undiagnosed infectious cattle out there and more "rigorous testing" will more effectively cull out all infected cattle and new herd infections will reduce, so they tell us. But I see no sense in killing cattle this way as they are the innocent sentinels of active disease in badgers. The TB test may not be perfect but repeat herd testing and slaughter of reactors has eradicated TB from all other Member States in Europe other than the UK and Ireland. And in Ireland a combined policy of control in cattle and culling infected badgers has resulted in a 42% fall in reactors since 2002. We are the only country with a deteriorating problem. And from their recommendations based on their dubious work, the ISG would appear to be quite content with that. But the Minister has yet to decide what to do.

So £45 million later with no end to the carnage of our cattle and the human and economic costs involved, there is still no intent to face the reality of this serious disease which is becoming even more entrenched in our badger population.

I must admit I've gone off the ISG people."