

**CULLING BY NUMBERS: BLACKBOARD ECONOMICS AND FOOT AND
MOUTH DISEASE CONTROL**

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ABSTRACT

The foot and mouth outbreak in the UK in 2001 was both costly and shocking. In furtherance of the policy to ‘stamp out’ the disease by the cull of animals infected with foot and mouth disease (‘FMD’) or animals in proximity to those with the disease, 10m animals were slaughtered often in unspeakably cruel ways. Costs have been calculated at £9bn, and an already fragile rural economy was devastated. This paper argues that the entire basis of the stamp out policy was misconceived in that it rested upon assumptions of the ability to locate and isolate seats of the disease never likely to be met in conditions of modern agriculture. Not only were bio-security measures inadequate in the face of such a virulent disease, but the large-scale animal movements which increased that risk also made it more likely that the disease would have spread widely prior to detection. Contingency planning had not allowed for the rapid dispersal of diseased animals and the failure to understand the pattern of animal movements rendered the initial attempts at disease control hopelessly ineffective, thereby heightening the crisis. The ‘blackboard economics’ of the regulatory policy with its ignorance of the actual functioning of the market in livestock and its lack of appreciation of institutional features governing risk factors in animal disease has generated considerable adverse economic and social consequences.

INTRODUCTION

ANIMAL MOVEMENTS: THE RISK AND SPREAD OF FMD

In view of the virulence of the disease outlined above, it is vital to eliminate risk factors leading to an outbreak in the UK, and to ensure that any disease is quickly identified so

that animal movements can be curtailed, and the seat of disease isolated. The following account of the outbreak demonstrates that regulatory measures failed hopelessly. Bio-security failed because the regulatory structures failed to provide any effective deterrent against illegal conduct likely to generate the risk of FMD. The extent of animal movements was not understood by MAFF. In such circumstances the large-scale tagging and tracing of animals proved of little utility. Moreover the optimism of MAFF that sources of the disease could be traced hindered the effective handling of the outbreak.

A Northumberland pig farmer, Bobby Waugh, has been positioned as the villain in the foot and mouth tale. Admittedly, animal husbandry at his fattening unit clearly left a great deal to be desired. He is now banned from owning or dealing in animals for 15 years. However, certain curiosities remain. In an outbreak of FMD in France in March, 31 sheep were tested. 21 of those sheep proved negative, but 10 proved positive, with 7 testing highly positive.¹ These sheep were transported to France from Wales before the end of January, which would certainly seem to raise doubts as to the date and location of the outbreak (in February in pigs in Northumberland) as accepted in the published reports. The MAFF explanation, endorsed by the Anderson Report, is that the French testing probably represented “false positives”.² This constitutes an astonishing coincidence.

If we accept that the pig farm in Heddon-on-the-Wall was a source of the outbreak, there is a simple regulatory mechanism that may have prevented the outbreak itself and much of the anguish that followed. The overwhelming explanation for the transmission FMD to the pigs would have been the use of unprocessed pigswill probably containing meat illegally transhipped from Asia. There is speculation as to how such meat would have made its way into pigswill, and suggested sources are Chinese restaurants in the Newcastle area, or army camps in the locality. Yet only just over one percent of pig

¹ This is pointed out by the campaigning website, Warmwell, which draws attention to the fact that Dutch versions of the spread of the disease are impossible to reconcile with official views in the UK, as the Dutch trace their own source of infection to the French staging post at Mayenne– see further www.warmwell.com/30Julydate.html

² Anderson, I Foot and Mouth Disease 2001: Lessons to be Learned Inquiry Report (Stationery Office, London, July 2002) (hereafter ‘Anderson Report’), p.52. The sheep tested were located at Mayenne (supra).

farmers used pigswill, and the saving over other sources of swill are minimal – about £5 in the lifetime of a pig.³ The simple regulatory solution, taken by DEFRA⁴ as an interim measure, was to ban the practice of feeding swill to pigs in the U.K. Astonishingly, however, this ban has yet to be confirmed as a permanent measure,⁵ even though the EU may be moving in this direction.⁶

Ironically, early in 2001, in the North East of England, in Crook, a dealer in pigswill, Andrew Clement, was found to be passing unprocessed swill to farms. In a breathtaking example of the potential shortcomings of criminal law based regulation, given the eventual costs of the FMD outbreak, Andrew Clement was fined £400 by the magistrates.⁷ As for illegal importation of meat, inspection costs of imported meat by port health authorities, passed on to the importer, are charged at £30 per tonne, so that a 40 foot-long container with 30 tonnes might cost £2,800 to inspect. In contrast, the maximum fine before the Magistrates' Court is £5,000.⁸ There would seem to be incentives rather than disincentives to shippers to evade inspection and engage in illegal importation. Wider powers were given to prohibit the movements of meat imports at the time of the FMD outbreak,⁹ and responsibility for meat inspection is to pass from port health authorities to customs and excise.

First suspicions of the disease arose not in Northumberland but following a veterinary inspection on pigs at the Cheale Meats Abattoir at Brentwood, Essex on 19 February 2001. Although the disease was confirmed the following day, the five-mile exclusion

³ Brown D 'Did pigswill cause foot and mouth?' Guardian 26 March 2001.

⁴ See an amendment to the animal by products regulations banning the inclusion of meat products in swill

⁵ The Government line is that the ban remains an interim measure – see Commons Answer to question by Gordon Prentice MP by DEFRA Minister, Elliott Morley, on 20 June 2002 (H.C. Col 479W).

⁶ As there is much sense in this provision as a measure to protect against BSE, and EU agreement at a meeting of agriculture ministers in June 2001 approved this in outline – see DEFRA, Bovine Spongiform Encephalopathy: A Progress Report (DEFRA, London, June 2001).

⁷ Elliot V and Webster P 'Smuggled meat blamed for Epidemic' Times 27 March 2001, and see Harris, P and Browne, A 'Smuggled meat threatened UK with catastrophic viruses' Observer 1 April 2001, alleging that numbers of meat inspectors had declined at Dover Port Authority from seven down to one in an eight year period.

⁸ The Products of Animal Origin (Import and Export) Regulations (S.I. 1996/3124)

⁹ The Products of Animals (Import and Export) (Amendment) (England) Regulations 2001 (S.I. 2001/1640).

zone at the Essex abattoir was not put into place until 21 February 2001.¹⁰ The tracing of the animals passing through the abattoir suggested a possible source of infection at a farm run by Bobby Waugh in Heddon-on-the-Wall, Northumbria. A five-mile exclusion zone was established around this farm on 23 February 2001. However, it is also known that sheep sent to Hexham Market on 13 February were infected. There were 3,800 sheep passing through Hexham Market on that day and 120 dealers attending the market.¹¹ It follows that in contrast to the dilatory conduct of MAFF in declaring an exclusion zone in Essex, hundreds of potentially infected animals were being dispersed widely across the country.

However, there may well have been in excess of 100 sites of infection by the first confirmation of the disease in Essex.¹² The policy of stamp-out depends upon the ability to tag and trace animals as they move around the country. However, the huge investment in the record keeping makes sense only if the scale of animal movements are such that it is a simple matter to trace a limited number of contacts in order to ring fence infected farms as part of the stamp out policy. Conditions of modern agriculture make this an unlikely scenario. Ten years prior to the outbreak, there were more than one thousand abattoirs in the UK in 1991. In the ten years that followed more than two thirds of these abattoirs closed.¹³ Some closures resulted from the imposition of new EU standards.¹⁴ However, alongside this were significant changes in food production and consumption. More than 80 percent of the meat for human consumption is now handled through a major supermarket chain.¹⁵ The desire of many such retailers to produce meat presented

¹⁰ Studd, H 'Foot and Mouth at Essex Farm Complex' *Times* (21 February 2001).

¹¹ HM Comptroller and Auditor General, *The 2001 Outbreak of Foot and Mouth* (Stationery Office, London, June 2002)(hereafter "NAO Report") at para 1.7 and Cumbria Foot and Mouth Disease Inquiry Panel *Cumbria Foot and Mouth Disease Inquiry Report* (Cumbria FMD Group and Cumbria County Council, Carlisle, August 2002) p.25, and Elliott V '£900 sale of sheep led to rapid outbreak' *Times* 27 February 2001.

¹² David King in a lecture at the Royal Society on 12 November 2002 put this figure at 120; cf the Anderson Report which reports 57 infected farms in 16 Counties.

¹³ See H.C Debate 11 November 2001, col.111 in which David Taylor M.P. states that only just over 300 abattoirs remain, some 60 per cent having closed in the previous 15 years, and see Kennard R and Young R, *The Threat to Organic meat from Increased Inspection Charges* (Soil Association Report, Bristol, September 1999) "10 years ago there were 1,400 slaughterhouses in the UK. There are now barely 350...".

¹⁴ For an account of the impact of EU Regulation on the closure of abattoirs in the UK see: Shaoul, J.E., "BSE : For Services Rendered? The Drive for Profit in the Meat Industry". *The Ecologist*, Vol 27, No 5, 1997.

¹⁵ See David Taylor M.P. (fn 16 – supra).

to the consumer uniformly dressed and packaged means the concentration of meat production in certain chosen abattoirs. This in turn demands considerable movement of live animals.

However, one must question the utility of many such cattle movements. For example Britain imports 125,000 tonnes of lamb. However, at the same time it exports 102,000 tonnes.¹⁶ There can be little doubt that this seemingly pointless activity results from a Common Agricultural Policy which promotes intensive farming, requiring ever larger markets, rather than locally based patterns of rearing, supply and consumption. On the face of it the subsidies in the CAP promote cheap food even to the point of surplus. However, to this we must now attach the billions of pounds of cost attaching to the FMD outbreak to which the transportation of live animals contributed. However, worse than that, these policies actually create the very conditions necessary to stimulate endemic outbreaks of disease. Not long after the FMD outbreak, MAFF introduced a 21-day restriction on stock movements after initial shipment. Explaining the need to introduce such a measure a “Cabinet Minister” is quoted as saying:

“Nobody took account of the extent to which dodgy farmers moved sheep around to claim quota payments. That is the true story.”¹⁷

This is a reference to the practice of “bed and breakfasting” farm animals so that the numbers of animals forecast for the farm, early in the season, are actually available to the farmer at the time of inspection, thereby avoiding any shortfall in quota payments.¹⁸ If the farmer has a shortfall in forecasted numbers, the “Cabinet Minister” is alleging that farmers merely borrow animals in order to ensure a higher quota payment. The disease was spread to Scotland, Northern Ireland and the Republic of Ireland by a single dealer

¹⁶ Lucas C M.E.P., Stopping the Great Food Swap: Re-localising Europe's Food Supply (Greens/European Free Alliance, Strasbourg, March 2001).

¹⁷ Prescott M and Leake J ‘Ministers hit out at farmers’ Sunday Times 25 March 2001, and see Lobby Briefing dated 26 March 2001 from 10 Downing Street.

¹⁸ See the comments of the General Assembly of the Church of Scotland: ‘the dealer network encourages the so-called "bed-and-breakfasting" of animals to satisfy quota rules’ Committee on Church and Nation Proposal to Introduce a 20 day Standstill Period following Movements of Sheep and Cattle (Church of Scotland, Edinburgh, March 2001).

looking to gain a £10 per head premium plus a 4.5% VAT rebate by illegally passing off English lamb bought at Carlisle market as Irish lamb.¹⁹

This is but one consequence of CAP subsidies and consequential distortion of the market. The first of the Inquiry reports following FMD, Farming and Food, points to many other unwelcome outcomes. These include: the separation of producers from their market; the distortion of price signals; and the masking of inefficiencies in production. As far as direct payments for livestock are concerned, the report calls for a decoupling of subsidies from levels of production, as an interim measure:

“Farmers do need assistance in adjusting to reduced support and some compensation is justified for falling asset prices. However, anything other than short term assistance frustrates the objectives of reform, keeps farmers from the market and continues to encourage practices which may harm the environment.”²⁰

With the onset of the FMD, cattle and sheep movements were tightly controlled. However, even in the aftermath of these controls there were over 700 investigations into illegal movements.²¹

It is now accepted that MAFF estimated that transshipments of animals at only half of the rate of actual movements. This failure may help account for some of the extraordinary, initial confidence of MAFF that they could control the spread of disease. By the end of the first week in March the Chief Veterinary Officer issued the following statement:

“Most of the animals if they are going to develop the disease...should be showing signs last week and this week and possibly some overflow into next week. So the first evidence is that because we stopped all movements, we stop the spread of disease.”²²

¹⁹ Sheenan M and Kearney V, ‘Gardai quiz dealer on outbreak’ Sunday Times 4 March 2001, Cowan R, ‘Dealer seeks amnesty for help in tracing infected sheep’ Guardian 13 March 2001.

²⁰ Policy Commission on the Future of Farming and Food Farming and Food (Cabinet Office, London, January 2002) (hereafter ‘Farming and Food’) at p.21.

²¹ Leading to 195 cautions and 30 prosecutions most of which seem to have led to conviction (Anderson Report at para. 3.58).

²² BBC Radio Interview quoted in Henderson M ‘Vets more confident of halting outbreak’ Times 7 March 2001.

This can be placed alongside the similarly optimistic view expressed, on the same day by the Director of the Institute of Animal Health, whose laboratory was central to the control of the outbreak:

“My understanding is that the vast majority, if not all the current cases, are on farms with a link to the original outbreak and that is good news...everything that has happened so far might have been predicted. Had the disease taken off and moved out of control we would have expected to see cases with no connection to the original source by now.”²³

With hindsight, this optimism was hopelessly misconceived. As the disease did not peak until the end of the first week of April, and, then, only after the introduction of the horrendous, contiguous, cull Policy (described below). This statement of the Chief Veterinary Officer would only have been true if issued a whole month later.

Statements such as those above produced the impression that MAFF was in control of the outbreak of FMD and in the process of eliminating it. The Anderson Inquiry states that “the government departments were not greatly involved at this stage, largely because MAFF was not asking for help”.²⁴ The report into the 1967 outbreak of foot and mouth disease had made the following major recommendation: “arrangements should be made to seek assistance from the armed services at an early stage in a foot and mouth outbreak”.²⁵ This recommendation seems to have been ignored. It was not until the last week in March, over a month after the initial outbreak that the military were introduced. Moreover, the Anderson Inquiry suggests that the complacency within MAFF about disease control affected the entire Department:

²³ Ibid.

²⁴ Anderson Report, section 9.1.

²⁵ Duke of Northumberland Report of the Committee of Inquiry on Foot and Mouth Disease 1967/68 (Cmd 3999, HMSO, London, 1969) Chapter VIII and Recommendation 50.

“Individual groups and managers not directly involved with the outbreak remained focused on their own targets. There was no incentive to release staff to help in the fight against FMD.”²⁶

On 11 March, Nick Brown, Minister for Agriculture appeared on ‘Breakfast with Frost’.²⁷ He stated that the disease was under control and when pressed repeated that he was “absolutely certain” in this view. As the Anderson Inquiry points out, there was no evidential basis for this view. 34 cases of foot and mouth had been notified in the two days prior to that Sunday; 164 cases had been confirmed in total, and in Cumbria alone there were over 40,000 carcasses awaiting disposal. In the words of one farmer giving evidence to Anderson:

“We felt absolutely insulted and patronised by these lies that we were told.”²⁸

It is likely also that these continuing assurances from MAFF delayed the effective control of the disease. The Cabinet Office Briefing Room (COBR) was eventually put in control of work across all departments in handling the disaster, but not for almost two weeks after the Brown statement on television. If the complacent statements of MAFF were not a result of the continuing miscalculation of the spread of FMD, they must have constituted an even more cynical attempt to retain departmental control of the handling of the outbreak.

THE CULL AND ITS COSTS

The policy of stamp out involved the ring fencing and isolation of sites of disease. The contingency plan envisaged up to fifteen sites of infection lying undetected prior to the first notification. The policy depended on the rapid closure of all activity around these sites and the culling of the animals to prevent transmission of FMD. The large number of

²⁶ Anderson Report, para. 9.2.

²⁷ A transcript of this interview is available on the CD rom annexes to the Anderson Report at Annex E – Media Transcripts.

²⁸ Anderson Report at p.81; a MORI poll for the *Times* conducted between 22 -27 March 2001 showed that 66 per cent of urban residents, rising to 77 per cent of rural residents were dissatisfied with the Government’s handling of the foot and mouth outbreak – *Times* 29 March 2001.

infected sites across a wide geographical area ought to have caused an early and critical review of this policy. For example, in Devon, William Cleave, the first person to be affected through dealings at the Hexham Market, was one of the largest operators in the County, working from thirteen different sites.²⁹ It seems to be accepted that the transshipment of his animals was the sole source of introduction of the disease into the region, but Devon eventually suffered 173 confirmed cases of foot and mouth disease. The rapidity of the spread of FMD across a wide geographical area could have prompted early consideration of other possible disease controls such as vaccination. However the contingency planning had made no provision for this. In the words of the Chief Veterinary Officer:

“No estimate (had) been made of the human resource requirements for a vaccination programme...The assumption (was) made that a stamping out policy would be operated first and that, if sufficient trained resources were immediately available as outlined, vaccination could be avoided.”³⁰

European Union Guidelines on contingency planning demanded that Member States provided resources for the immediate availability of trained staff to cope with up to ten cases at any one time and to maintain surveillance with a three kilometer protection zone within each.³¹ The FMD outbreak of 2001 was to generate demands for resources considerably in excess of such a contingency plan. By way of illustration, the Anderson Inquiry also states that around eighty percent of the vets in the State Veterinary Service (SVS) helped to tackle the swine fever outbreak of 2000, even though that was confined to just 16 cases.³²

The Devon Inquiry reports that the State Veterinary Service had been “run down over the last two decades and was greatly over-stretched during the outbreak and its aftermath”.³³ When it became clear that the SVS could not cope, additional vets including vets from

²⁹ Gillan A, ‘Panic felt across the west country’ Guardian 27 February 2001

³⁰ Anderson Report at p124.

³¹ European Commission Recommendations or Guidelines for Contingency Plans against Foot and Mouth Disease (DGVI/1324/9, March 1991).

³² Anderson Report, para 9.2.

abroad or trainees were recruited to assist. However, the goodwill of the vets was not enhanced by the public payment structures. The fee offered to vets was £160 per day.³⁴ At the same time, valuers were being paid on a much more generous pay scale. In order to ensure that farmers did not resist the slaughter of animals, valuers were given an incentive to value generously by linking their payment to the value of the cattle destroyed. It became necessary to put a ceiling on the operation of this formula, and this was set at £1,500 per day.³⁵ In one in every five valuation days, this cap was reached and a sum of £10m was paid out in valuation fees.³⁶ The problems of marshalling resources to deal with FMD were by no means confined to vets. The contingency planning had not foreseen the need for the disposal facilities needed to cope with culled animals. No contractual arrangements were in place. The Scottish waste contractor, Snowie, is reported to have billed £38.4 million for work undertaken at the time of the outbreak in facilitating the disposal of slaughtered stock.³⁷

The limited nature of the contingency planning together with the misplaced confidence in the ability to trace animal movements and operate stamp-out effectively meant that in its early weeks FMD spread alarmingly. The turning point came some five weeks after the initial infections when the Cabinet Office Briefing Room (COBR) stepped in to coordinate the work of all Government Departments in handling the disaster. Coinciding with the involvement of COBR was the introduction of the Contiguous Cull Policy. This was a policy to destroy on a precautionary basis “animals within the 3 kilometre zones”.³⁸ The very announcement of this statement caused consternation, since, in effect, the policy only applied to sheep and pigs, but this was not immediately made clear. There was also confusion regarding the scope of the cull. The FMD Science Group had recommended a more restrictive approach than that announced by Nick Brown (above) based on a smaller radius because the three-kilometre cull was felt to be ‘neither practical nor likely to be

³³ Mercer I, *Crisis and Opportunity; Final report of the Devon Foot and Mouth Inquiry* (Devon Books, Tiverton, 2002)

³⁴ NAO Report para 3.39.

³⁵ *Ibid* at 4.13

³⁶ NAO Report at para. 4.13.

³⁷ NAO report Table 55.

³⁸ Statement by Nick Brown – see Anderson at p.89. This statement was made by the Minister on 15 March but not implemented (except for some areas of Scotland) until 28 March.

legal'.³⁹ The three-kilometre radius is not accidental but emanates from the protection zone demanded by E.U. law.⁴⁰ A protection zone is not by any means a 'cull' zone. However, notwithstanding the modification to a smaller area, in parts of the country such as Cumbria, the three-kilometre cull seems to have been retained with the contiguous cull used to 'expand' the slaughter.⁴¹ Alongside the Contiguous Cull Policy was a target to slaughter infected stock within 24 hours and dispose of the carcass within 48 hours. Overseeing the operation of this policy was the FMD Science Group.

The Anderson Report is extremely defensive in relation to the FMD Science Group, describing them as experts and stating that:

"Many of the public accusations levelled at the work are based on limited knowledge of the statistical and mathematical techniques they employed...the highly specialist nature of their work made it difficult for other FMD experts to engage with the detail, especially when they themselves were under huge pressure of work in managing the outbreak."⁴²

There is however another view of the work of the FMD Science Group as expressed to the Devon Independent Inquiry by a veterinary surgeon:

"Their idea was to control the disease by culling in contiguous farms. That is absolutely fine if you are sitting in front of a computer screen in London. However, it is different on the ground. A person in London will just see the numbers and will say that they have to be taken out. That is why it was carnage by computer."⁴³

What in effect the FMD Science Group did was to model the likely spread of infection from farm to farm in order to bring the disease on to a downward trajectory such that the

³⁹ Anderson Report at p.93

⁴⁰ Art.9 of EU Directive 85/511

⁴¹ Cumbria Foot and Mouth Disease Enquiry Report p.41.

⁴² Anderson Report at p 91.

rate of spread would always become smaller. Beyond doubt, this was achieved, but the approach was later admitted to have been “over draconian”.⁴⁴ The approach took no account whatsoever of the possible variable conditions of spread according to factors such as geography. It made no allowance for natural barriers which might restrict spread. It made no distinction between inspected species, though it is clear that pigs present by far the greatest risk through exhalation. The model may well have overestimated wind spread. This is a common source of transmission of this highly infectious disease, but there is some evidence to suggest that in relation to this particular strain of virus, direct contact was a much more important mode of transmission. Finally, no distinction was made between different farming practices in different regions, and the contiguous cull Policy allowed for no assertion that a farmer had exercised rigorous bio-security measures. In many areas any farm within a three-kilometre radius had its animals culled.

In describing “carnage by computer”, well in advance of the Anderson Inquiry, the witness of the Devon Independent Inquiry shows great foresight. The Anderson Inquiry went on to show that the geographical information system deployed was generally used for the purpose of calculating CAP subsidies. In the words of the Inquiry:

“Information is frequently out of date, on occasion by several years. It was sometimes difficult to pinpoint the location of livestock accommodation within an individual holding, or identify the operator of that land.”⁴⁵

There are many stories of slaughtermen arriving at the wrong location, but of course farmers could not know, however good their own bio-security, that they were not within a contiguous cull area.

According to the Meat and Livestock Commission, ten million animals were killed.⁴⁶ One in three diagnoses appear to have been incorrect. This is not surprising, given the

⁴³ Wendy Vere, Veterinary Surgeon giving evidence to the Devon Inquiry – supra n.37.

⁴⁴ Statement by Dr Neil Ferguson for the Chief Scientist’s Advisory Group as reported by Highfield R

‘Tactics used on half the farms “were inefficient” ’ Daily Telegraph 22 May 2001.

⁴⁵ Anderson at p.72.

generation of veterinary scientists with no effective experience of FMD. However, this figure relates to *confirmed* diagnoses (which were nonetheless wrong) but where there was thought to be no time for confirmation, a policy of “suspected slaughters” was pursued. Four in every five of these suspected slaughters did not involve an actual outbreak of foot and mouth. It is worth recalling when reading these figures, that each of these suspected slaughters then involved contiguous farming units often within the three-kilometre radius. On average, there would be four such units.

This produces a ripple effect, and it means that long after the actual onset of disease has peaked, numbers of animals killed continued to grow. In total, 2,026 farming premises said to be infected produce pre-emptive culling on a further 8,131 premises. In the first week of the Contiguous Cull Policy there were 48,000 animals slaughtered each day. In two days in Devon 32,000 animals were slaughtered. In the week beginning 25 March, there were 293 infected premises “confirmed” as suffering from FMD. By the week beginning 6 May 2001 there were 49 such premises, but by mid-May, the daily slaughter had risen to 80,000 animals.⁴⁷

The foot and mouth outbreak of 2001 generated costs totalling no less than £9 billion, and with at least £3 billion in the direct cost of the stamp out policy to the public sector.⁴⁸ Amongst these direct costs were significant sums of compensation to farmers, totalling 1.34bn. The largest single payment was some £4.2 million, but 59 dealers in total

⁴⁶ In fact 10,791,000 of which the vast majority (9.5m) were sheep – see unpublished work By Jane Connor of the Meat and Livestock Commission as reported by Robertson C, ‘Slaughter toll three times the official figures’ Sunday Post 20 January 2002.

⁴⁷ Figures extracted from the various reports but particularly from the NAO Report.

⁴⁸ There are different estimates of the precise costs of the foot and mouth outbreak. The figure used by Defra is £9bn, see DEFRA and DCMS The Economic Cost of Foot and Mouth in the UK: A Joint Working Paper (DEFRA, London, March 2002). The National audit office suggest a somewhat lower figure, though one which exceeds £8bn (see HM Comptroller and Auditor General, The 2001 Outbreak of Foot and Mouth (Stationery Office, London, June 2002)(hereafter “NAO Report”). Part of the explanation for this lower figure is that although there were considerable losses to tourism, the NAO report allows that money was expended elsewhere in the economy, reducing the net economic loss. In an astonishing piece of forecasting the Centre for Economics and Business Research predicted in early March 2001 that the overall cost would amount of £9bn – ‘Bill for farms crisis hits £9bn’ Sunday Times 18 March 2001, cited in Barclay, C ‘Foot and Mouth Disease’ Research Paper 01/35 (House of Commons Library, London, March 2001).

received more than £1 million and 323 others more than £500,000.⁴⁹ Stamp out demands early declaration of disease, and a contiguous cull policy of animals whether or not infected necessitates payment of compensation. From the outset, MAFF were keen that there would be little argument in relation to the slaughter of infected stock. Payments were intended to be generous. The top price for two-year old sheep at the Carlisle Market at the outset of the outbreak was £42 per head.⁵⁰ In contrast, the average value across the first four weeks of the outbreak was £100 per head in compensation. This figure eventually peaks at £300 in July 2001. Similarly, the average compensation payment for cattle tripled during the course of the outbreak.⁵¹

The Animal Health Act 1981 demands the payment of compensation, and this is to be based on the value of the animal immediately prior to infection.⁵² Although there is no definition of “value” within the Act, it is accepted that MAFF were operating on a market value basis. However the problem with this is that there was no functioning market during the outbreak. Moreover, as millions of animals were destroyed, one might expect the valuation of stock to rise in order to reflect the subsequent shortage of stock. However, there were other factors at work. Obviously MAFF appointed valuers, but under the legislation, it was also open to the farmer to appoint a valuer also. It became clear from very early in the outbreak that over ninety percent of farmers were likely to do so, and in practice it became easier to allow the farmer to choose the valuer. As one might expect, in rural communities, word soon got round as to which valuers were the most generous. Moreover, as is shown above, the valuers themselves had personal incentives to inflate value.

⁴⁹ See NAO Report, Part 4 and Table 51. It must be stressed that many farmers affected by the outbreak went uncompensated. Diseased cattle, and those taken out in the contiguous cull (see below) received compensation. There was also compensation assistance for “welfare killings”, to prevent unnecessary suffering of animals. However, farmers whose animals were not diseased but could not be moved to market incurred considerable uncompensated losses alongside many others in the rural economy.

⁵⁰ This is the price at which the dealer engaged in illegal movements bought at Carlisle market on 21 February 2001 – see fn 19 (supra).

⁵¹ Ibid at 4.6.

⁵² Section 1 of the Act allows the Minister to make such orders ‘as he thinks fit’ for ‘the purpose in any manner preventing the spread of disease’. Most famously this power has been used to pass the primary regulations, The Foot and Mouth Disease Regulations 1983 (S.I. 1983/1950. Section 34(7) of the Act contains an order-making power in respect of compensation to be paid, giving rise to a series of Foot and Mouth Disease (Ascertainment of Value) Orders.

To promise compensation in this way, as the legislation does, is to remove all incentives to precaution. This is not to accuse farmers of reckless or even careless conduct in spreading the disease. Elsewhere, we explore the economic basis of this policy, and argue that the real iniquity is in a system that promotes the conditions whereby the outbreak and spread of the disease are promoted precisely because of this failure to internalise the risk.⁵³ Not surprisingly in the circumstances, fewer than one in ten farmers carried insurance, but bizarrely, where they did, neither the Government nor the insurers withheld payments. It followed that a minority of farmers received two sets of payments at levels far exceeding market value prior to the outbreak, while neighbouring farmers received nothing. In the circumstances, reports of deliberate infection, and offers to supply the virus seem credible.⁵⁴ Yet bizarrely in introducing an aborted Animal Health (Amendment) Bill in late 2001, the Minister, rather than questioning the entire approach to compensation provided for specific criminal law powers to deal with deliberate infection.⁵⁵

⁵³ REF

⁵⁴ Certainly DEFRA found it necessary to send out warnings about deliberate infection – see DEFRA Position on Deliberate Foot and Mouth Disease Infection (DEFRA, London 13 July 2001) BBC news also reported that EU anti fraud inspectors had voiced suspicions of deliberate infection (17 August 2001).

⁵⁵ Elliott Morley in evidence to the Select Committee on Environment Food and Rural Affairs (6 November 2001 at para 131) admitted that Maff strongly suspected but could not prove any cases of deliberate infection, but was introducing stronger powers to deal with the problem nonetheless.