SCRAPIE AND HUMAN HEALTH: TYRRELL COMMITTEE

1. Mr Lowson asked for comments on this draft paper. I am replying to you in his absence on leave. Although other copy recipients had seen a previous version, it seems this was the first time we had seen the paper.

2. The origin of this paper is the discussion we had at the last meeting based on the paper I tabled (copy attached) and which I suggest we circulate again this time. The version you provide reads more like a paper for Ministers (I understand you want to clear it with them, though at least in this Department that would be very unusual practice for a technical committee). The Tyrrell Committee needs more facts and figures and a guide to relevant key points in the argument. It is up to them to advise on the appropriate response.

3. Para 5 of paper SEAC 4/6 suggests some of the data we might need. All of this could be provided in annexes to your main paper after that has been suitably modified. As scientists the committee would prefer to see tables of numbers rather than prose descriptions. So for 5(i) we need to know how many sheep there are, how many of what ages are slaughtered annually, something about live sheep movements within the country and between the UK and elsewhere. Broad figures will do. For 5(ii) we could be given the data that you do have and the committee will have the experience to judge as to how much weight to attach to it. For 5(iii) it is vital that you share with the committee all the suspicions you have or else commit in writing a clear statement that there are no cases of scrapie with clinical presentation or pathology that might be regarded as atypical. Again, we need more detail for 5(iv), since it is likely to committee will want to modify item A3b of the Tyrrell research committee shopping list to upgrade the priority. Information on uses of ovine offal, and that includes non-food use, are needed for annex 5(v). And we need information on the timetable of research for 5(vi): if some crucial experiments are close to fruition it might be worth waiting for the results, but if just set up advice may have to
be given without that information. Should experiments be set up on BSE without concurrent controls both with "historic" scrapie and scrapie from sheep fed meat and bone meal since the mid 1980's?

4. Coming back to the main paper, I am uneasy with the phrase about becoming "pathogenic to man" eg in para 5. It would be best to describe "possible altered pathogenicity for man and other species". Since *every crossing of a species barrier could lead to a permanent change*, as well as a change in going from scrapie to BSE, *there could also have been another change in going from BSE back into sheep*; So 5(ii) is not quite right.

5. The dogmatic sentence at the beginning of your para 7 does not square up with information on atypical scrapie that has been discussed at CVL. The committee needs to see what evidence there is rather than just as well there is no evidence that there has not been such a mutation. Para 8 and the second half of para 14 suggest only brain among bovine tissues is infected in BSE. If you want to run this argument, then you need full information of what tissues have been injected into mice over what time period: I know the committee had this at their first meeting but I have since found that information was incomplete and the committee has changed now in any case. For my own part, I think it is too early to draw any conclusions on non-infected tissues and we should continue assaying the tissue distribution as is with scrapie.

6. The end of para 8, in suggesting very few sheep coming for human consumption will have been exposed to BSE in feed, specify the very real possibility that BSE like scrapie in sheep will be transmitted vertically.

7. The committee needs to see the data hinted at in para 10. It may feel the time is right to form "best guess judgements" rather than waiting for "firm conclusions". The information needs to be precirculated to give all members adequate time to mull over the possible implications. There should be no secrets kept from our advisers.

8. Para 13 considers the threat from ovine BSE only from a food point of view. There might be other hazards (health and safety, medicinal products etc). The factors mentioned in para 13 are not particularly strong: (a) returning in a modified form to the original species would not be as difficult as a completely new species jump, I imagine; (b) sheep have been less exposed to BSE because the time of exposure has been shorter (from around 1984 to 1988) as well as the dose lower, but (c) vertical transmission is much more likely.

9. What about detailing all this research (with numbers, dates etc) in a separate annex.
10. Can you frame the conclusions more open to invite the Committee to form their own view? Try this. "We believe there was a time period of around 4 years during which some sheep were fed material not only infected with sheep scrapie but also with the agent passaged through cattle i.e. BSE agent. In theory ovine BSE could: (a) have altered pathogenicity compared with scrapie for sheep and for other species, possibly even man (b) risk become endemic in sheep. The committee is invited to review the evidence available to date, to consider whether the current research programme needs modification to give due priority to these questions and to give advice on the implications if any for human health."

11. I note you have restricted your paper to the human health implications, but you might like to consider using this opportunity to discuss what this might mean for sheep too.

12. Please let me see the modified paper before it goes out to the Committee.

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