

Opinion on BSE risk adopted by the Scientific Steering Committee at its plenary meeting of 26-27 March 1998, following a public consultation on the preliminary opinion adopted on 19-20 February 1998

In considering the risk of BSE, the SSC recognised three major issues:

1. the risk of human exposure arising from the direct consumption of potentially infective material;
2. the risk to man from ingesting or being exposed to processed potentially infective material (e.g. tallow or gelatine), and
3. the risk of propagating the infection by recycling the infective material through animal feed (MBM).

A key factor in considering these three risks is the relative infectivity of tissues in an infected bovine. By excluding the most infective tissues from the processing chains the risk of transmitting BSE can be considerably reduced. This position is confirmed by recent information which allows to quantify the contribution of the different most infective tissues to the overall infective load of an infected bovine (see table 1).

Table 3: Relative infectivity of suggested specified risk material from an infected bovine (data provided by SEAC, February 1998; updated, July 1998)

Tissue	Infectivity density (CoID ₅₀ /g) ¹	Weight (kg) per Animal of 537 kg	ID ₅₀ per animal	% of total infective load per animal
Brain	10	0.5	5000	62.3
Spinal cord	10	0.2	2000	25.1
Trigeminal ganglia	10	0.02	200	2.5
Dorsal root ganglia	10	0.03	300	3.8
Ileum	3.2*10 ⁻¹	0.8	260	3.3
Vertebral column	3.2*10 ⁻²	5.0	160	2.0
Spleen	3.2*10 ⁻²	0.8	26	0.3
Eyes & rest of head	3.2*10 ⁻²	11.6	370	4.6

¹ CoID₅₀ = Cattle oral Infectious Dose 50%

The SSC confirmed its SRM listing of 9/12/97 on the basis of infectivity but noted that with suitable slaughtering procedures in place the lungs are not contaminated and therefore may be excluded from that list. Similarly the SSC is

satisfied that practical procedures in the slaughterhouse can be defined to ensure that the ileum is separated from other parts of the intestine. If these procedures are ensured then only the ileum need be considered infective.

As concerns the importance of the species of the animals, the SSC re-affirmed its conclusions that the risk of BSE in sheep and goats can not be estimated, although no cases of TSE, caused by the BSE agent, have been detected in small ruminants, outside experiments. It therefore reaffirms its conclusion of 9/12/97 that the heads and spinal cords of sheep and goats should be removed from animals aged one year or more and the ileum and spleen should be discarded at all ages. However, in order to confirm this conclusion, a risk assessment should be carried out addressing the probability of BSE being present in sheep and goats. This requires information that currently is not available to the SSC.

1. Human exposure by direct consumption

With regard to Human exposure by direct consumption the SSC recognised that a listing of SRMs should take account of their specific infectivity and the total weight of different tissues (see table 1).

Based on the quantitative data, the SSC recognised that the brain, spinal cord, dorsal root ganglia and trigeminal ganglia constitute the major hazards for direct human consumption. These would constitute 96% of the infective load from an infected animal, entering the food chain in the last nine months before the clinical manifestation of the disease (youngest animal ever seen: 20 month). The age of the animal therefore affects the risk of infectivity, too. So the SSC reaffirms its view of 9/12/97 that SRMs should be removed from animals over 12 months of age in countries, which are not BSE-free or don't have a negligible risk.

Mechanically recovered meat may also be a risk material since it may contain dorsal root ganglia.

2. Human exposure via processed products (tallow and gelatine)

Concerning the risk carried by Tallow and Gelatine, the SSC adopted two opinions on the safety of Tallow and Gelatine. It underlines that these opinions are based on a risk assessment aiming at achieving the lowest possible risk. It will complement them with a quantitative risk assessment, as soon as the necessary information becomes available.

3. Propagation of the disease via the feed chain

Concerning the risk carried by MBM, the SSC adopted an opinion on the safety of MBM. It underlines that this opinion is based on a risk assessment aiming at achieving the lowest possible risk. It will complement it with a quantitative risk assessment as soon as the necessary information becomes available.

4. Sourcing of animals

The geographical source of the animals has been considered in great detail at three different levels:

- the risk that an infective animal enters the food chain (incident risk);
- the risk that an infective animal would propagate the disease by entering the feed chain (propagation risk), and
- the risk to humans of being exposed to an infective dose of BSE (human exposure risk).

On examining the dossiers already provided by some countries, it became clear that the currently available data are not sufficient to confidently classify these countries. In order to obtain the necessary information the SSC endorses the list of the desirable data presented in its final opinion on the contents of a "complete dossier of the epidemiological status with respect to TSEs", adopted on 20 February 1998.

At this stage the SSC, can not provide a definitive view on geographical categories. It will return to this issue and will also devise a methodology to assess information provided by countries in this respect.

