

TSE risk assessment from carcasses of ovine and caprine animals below 6 months of age from TSE infected flocks intended for human consumption

Scientific Opinion of the Panel on Biological Hazards

(Question No EFSA-Q-2007-202)

Adopted on 5 June 2008

SUMMARY

Following a request from the European Commission, the Panel on Biological Hazards (BIOHAZ) was asked to deliver a scientific Opinion on a TSE risk assessment from carcasses of ovine and caprine animals below 6 months of age from TSE infected flocks intended for human consumption. Its terms of reference were as follows: to provide an assessment on the existence of a significant additional risk to human health compared with the actual situation, founded on the scientific evidences, from the consumption of carcasses from ovine or caprine animals below 6 months of age from TSE affected flocks (without been subjected to a TSE rapid test and irrespectively of the genotype) provided that the entire head and the viscera of the thoracic and abdominal cavities are removed and excluded from human consumption and provided that BSE is excluded (in the outbreak) according to the procedure laid down in 3.2 (c), Chapter C of Annex X to the Regulation (EC) 999/2001.

After clarification from the Commission, the BIOHAZ Panel was able to refine the ToR to focus on the change of human exposure that might result from the proposed change of risk management procedure and that it specifically required an estimate of the relative levels of TSE infectivity in the carcass of a lamb or kid less than 3 months of age from which spleen and ileum have been removed, compared to the carcass of a lamb or kid less than 6 months of age from which the spleen, the ileum, the head and the viscera of the abdominal and thoracic cavity have been removed.

In answer to these ToR, the BIOHAZ Panel concluded:

- A quantitative comparison of infectivity load in both scenarios is not possible, because there are no data available on the amount of infectious tissues that would be still present on the carcasses of 3 months and 6 months of age of lambs and kids, prepared according to the terms of reference (*i.e.* 3 months with head and viscera from the thoracic and abdominal cavity remaining for human consumption, but excluding the spleen and the ileum which is currently removed as Specified Risk Material; 6 months of age without head and all the viscera from the thoracic and abdominal cavities).
- There is an increase, between 3 and 6 months of age, of the number of PrP^{res} accumulating lymphoid formations. A part of these newly involved lymphoid formations would remain on dressed carcasses.
- In the worst case scenario, there would be an increase in infectivity level in lymphoid tissue between ages of 3 and 6 months (approximately 10 fold) on a per unit weight basis.

- The level of infectivity in secondary lymphoid tissues that may remain on the dressed carcasses, can reach by 6 months of age a level of infectivity per gram equivalent to 1/50 of that found in the same amount of brain tissue from a terminally affected sheep.
- Removal of the head and the thoracic and abdominal viscera will result in incomplete removal of the infectivity load at both 3 and 6 months of age.
- In the absence of new quantitative data on the tissue infectivity load in kids and lambs, the risk assessment and procedures for safe sourcing of small ruminant materials proposed in 2002 by the SSC, including the use of the combination of genotype and age as sourcing criteria, remain valid.

The BIOHAZ Panel further recommends that to facilitate future attempts at quantitative risk assessments in this field, more experimental work is needed to define the variability and uncertainty of both the estimates of relative infectivity titre at different ages in young lambs and kids and of the weights of lymphoid tissue entering the food chain.

Key words: TSE, Scrapie, ovine, caprine, carcasses, human exposure.