TECHNICAL REPORT

Annual report of the Scientific Network on BSE-TSE 2013¹

European Food Safety Authority², ³

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ABSTRACT

The EFSA Scientific Network on bovine spongiform encephalopathies and other transmissible spongiform encephalopathies (BSE-TSE) held its 8th meeting on 8 and 9 October 2013 in Parma. The meeting served as an opportunity to exchange scientific information on BSE-TSE related issues among EU Member States, countries from the European Free Trade Association, EFSA, the European Commission and ad hoc participants. In this occasion, ad hoc representation included the World Animal Health Organisation (OIE), the EU Reference Laboratory for Proteins in Feed and the OIE-EU Reference Laboratory for animal TSEs. The issues discussed ranged from individual Member State cases studies (i.e. investigation of a potential BSE-like case in a goat in Poland) to worldwide issues of common interest in the field of BSE-TSE (i.e. update on activities of the OIE). Opportunities for topics that could be shared in the future in this Network were also discussed, and the Network Members and Observers expressed their interest to continue having yearly meetings.

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KEY WORDS

network, BSE, TSE, meeting

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**SUMMARY**

Developing networking and stronger co-operation with the Member States (MSs) and strengthening EFSA’s relationship with its institutional partners (EU and international) and stakeholders are among key recommendations formulated by EFSA’s Management Board. In accordance with EFSA’s strategy for cooperation and networking with MSs, the Scientific Network on BSE-TSE was launched in 2006. The BSE-TSE Network had its first meeting in 2006, and following this one meeting per year has been held.

The main overall goals of the BSE-TSE Network are to: improve dialogue among participants; build mutual understanding of risk assessment principles; enhance knowledge on and confidence in the scientific assessments carried out in the EU; and provide increased transparency in the current process among MSs and EFSA. In turn, it aims to raise the harmonisation level of the risk assessments developed in the EU.

The BSE-TSE Network is currently composed as follows: Network Members representing 27 EU MSs (Malta has not appointed a representative to this Network) and Network Observers representing countries from the European Free Trade Association (EFTA), EU Candidate Countries and Potential EU Candidate Countries. The European Commission Directorate-General of Health and Consumers and of Research are also Observers in the Network.

The eighth meeting of the Network was held on 8 and 9 October 2013 in Parma. In this occasion, representatives from the World Animal Health Organisation (OIE), the EU Reference Laboratory for Proteins in Feed (EURL-AP) and the EU Reference Laboratory for animal TSEs (EURL-TSE) were also present.

Beyond exchanging information on the activities in the BSE-TSE field carried out by Network Members, Observers, the European Commission and EFSA since the last meeting, several specific issues were discussed in the 2013 meeting. Key discussions included: past and present perspectives of BSE and TSE in Croatia, a scientific update on the potential for transmissibility of non-prion protein misfolding diseases, a case study on the characterisation of a potential BSE-like isolate from a goat in Poland and updates on BSE-TSE related activities form the OIE, the EURL-AP and the EURL-TSE.

Following discussion on potential further issues to be considered within the frame of the Network, it was decided by the Members and Observers of the Network to continue meeting once per year and to use the available electronic tools for discussion and data exchange if needed.
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BACKGROUND AS PROVIDED BY EFSA

The European Food Safety Authority (EFSA) is the keystone of European Union (EU) risk assessment regarding food and feed safety, animal health and welfare, nutrition, plant protection and plant health. In close collaboration with national authorities and in open consultation with its stakeholders, EFSA provides independent and transparent scientific advice and clear communication on existing and emerging risks associated with the food chain. On request from the European Commission, European Parliament or Member States (MSs) or on its own initiative, EFSA provides scientific opinions on issues falling under its remit.

The Scientific Panel on Biological Hazards (BIOHAZ) provides independent scientific advice on biological hazards in relation to food safety and food-borne diseases. This covers:

- Food-borne zoonoses (animal diseases transmissible to humans);
- Transmissible spongiform encephalopathies (BSE-TSEs);
- Food microbiology;
- Food hygiene and associated waste management issues.

The Panel is one of EFSA’s key drivers on work on BSE and TSE. It carries out risk assessments in order to produce scientific opinions and advice for risk managers. The Panel’s risk assessment work is based on reviewing scientific information and data in order to evaluate the risks posed by a given issue. This helps to provide a sound foundation for European policies and legislation and supports risk managers in taking effective and timely decisions.

Developing networking and stronger co-operation with the MSs and strengthening EFSA’s relationship with its institutional partners (EU and international) and stakeholders are among the key recommendations formulated by EFSA’s Management Board. In accordance with EFSA’s strategy for cooperation and networking with MSs, the BSE-TSE Scientific Network was launched in 2006. The BSE/TSE Network had its first meeting in 2006 and following this, one meeting per year.

The seventh meeting of the Network was held on 10 and 11 October 2012. Members representing the MSs were appointed by the EU MSs themselves through the Advisory Forum and the EFSA Focal Points.

TERMS OF REFERENCE AS PROVIDED BY EFSA

The main overall goals of the Scientific Network on BSE-TSE are to: improve dialogue among participants; build mutual understanding of risk assessment principles; enhance knowledge on and confidence in the scientific assessments carried out in the EU; and to provide increased transparency in the current process among MSs and EFSA. In turn, it aims to raise the harmonisation level of the risk assessments developed in the EU.

The Network strengthens the scientific cooperation on BSE-TSE. It aims at anticipating and reducing the duplication of activities and hence avoiding divergence of opinion. The Network is a privileged environment to share data and methodologies facilitating harmonisation of assessment practices and assist in anticipating emerging risks in the EU.

The specific objectives of the Scientific Network on BSE-TSE are:

- Identifying common themes and areas for mutual collaboration.
- Identifying and avoiding duplication and divergence of opinion.
Identification of experts in specific areas and on special issues.

Sharing of data availability and quality.

Strengthening cooperation amongst risk assessors and managers.

Exchanging information between EFSA, MSs and other stakeholders.

Strengthening communication between EFSA-MSs and Risk Assessment-Risk Managers - Stakeholders.

Focusing attention on and streamlining of common research needs.

Identifying potential emerging risks when addressing current issues.

EFSA may entrust to the Network certain tasks, in particular preparatory work for scientific opinions, scientific and technical assistance, and collection of data.

The activities of the Network should be recorded in meeting minutes. In addition, an Annual Report summarising the activities will be produced.
ACTIVITIES

1. **Follow-up from annual meeting 2012**

At the 2012 BSE-TSE Network meeting, the Members and Observers of the Network highlighted several issues of interest. In particular, those issues have been addressed as follows:

1. Update the repository in EFSA’s Sciencenet (extranet information exchange platform) with information and presentations shared during all the Network meetings held. This has been updated and will automatically be updated after each Network meeting.

2. Analyse the questionnaire-based survey launched following the 2012 Network meeting on issues to be consider in 2013 Network meeting. This has been done and the agenda of the 2013 meeting reflected the issues addressed by Network Members and Observers.

2. **Annual meeting 2013**

The annual meeting was held on 8 and 9 October 2013 in Parma, and was attended by representatives from 22 European Union (EU) Member States (MS) (Austria, Belgium and Luxembourg, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Finland, France, Greece, Hungary, Ireland, Italy, Latvia, The Netherlands, Poland, Romania, Slovak Republic, Slovenia, Spain and United Kingdom) and two EFTA countries (Norway and Switzerland). The European Commission (DG SANCO) was also present at the meeting. Further ad hoc attendees to this meeting included: Dr. Stuart MacDiarmid (World Organisation for Animal Health (OIE)), Dr. Gilbert Berben (EU-Reference Laboratory for Animal Proteins in Feedingstuffs (EURL-APF)) and Dr. Marion Simmons (EU Reference Laboratory and OIE Reference Laboratory for animal TSE (EURL-TSE)). Apologies were received from Network Members from Denmark, Germany, Lithuania, Portugal and Sweden. Malta has not appointed a representative to this EFSA Network. Further apologies were received from Network Observers from the EU Candidate and Potential Candidate countries who were not able to join in this occasion: Albania, Bosnia-Herzegovina, Former Yugoslav Republic of Macedonia, Kosovo under UN Security Council Resolution 1244, Montenegro, Serbia and Turkey.

The following are key issues that were discussed:

- Past and present BSE and TSE perspectives in Croatia.

Croatia was welcomed to the Network as a Member in this special occasion, following the adhesion of Croatia to the EU. The representative from Croatia presented historical and current experiences on the approach to BSE and TSE surveillance and controls. Historical preparedness activities aiming at building TSE-testing capacity and knowledge on TSE controls were carried out with the support of different countries in the past, in particular of the UK. BSE surveillance in cattle Croatia has not identified any positive case. Regarding other animal TSEs, a case of Atypical scrapie in sheep has been identified in 2013.

- Update on activities of the OIE in the field of BSE and other animal TSEs

The representative from the World Organisation for Animal Health (OIE) presented the activities of this organisation related to BSE and scrapie. A short description of the current BSE epidemiological situation was presented. Considerations about Atypical BSE and other animal TSEs were discussed. The OIE representative highlighted that there were no particular activities ongoing at OIE level regarding the differentiation of BSE based on strain characterisation (i.e. Classical BSE, Atypical BSE). Recent modifications in the BSE chapter of the Terrestrial Animal Health Code regarding small countries were discussed. Further, it was addressed that recently discussions have been held at OIE level on Chronic Wasting Disease of cervids.
• Scientific update on the potential for transmissibility of non-prion protein misfolding diseases

The representative from Austria updated the participants on scientific issues related to the prion-like behaviour of altered proteins (‘prionoids’). The state of the art of experimental and epidemiological evidence on the potential for transmissibility of non-TSE protein misfolding diseases was presented. Experimental evidence shows that there are proteins (e.g. Abeta amyloid, tau, alpha-synuclein) that can behave in a similar way to the prion protein in terms of in-vivo propagation when experimentally inoculated animal models. There is no epidemiological evidence that human to human transmission has occurred in cases other than prion disorders. Still, it is acknowledged that the epidemiological investigation of the occurrence of this hypothetical phenomenon is not straight forward.

• Case study on the typing of a potential BSE-like isolate from a goat in Poland

The representative from Poland described the scientific, technical and procedural aspects for the typing of TSE isolates from small ruminants. Firstly, the description of the bases for BSE and Scrapie strain-differentiation where presented with detail. This included not only the laboratory methods used but also an indication of the criteria that is applied for the characterisation of TSE isolates in animals. Secondly, available results of the typing of a potential BSE-like isolate from a goat in Poland were shown with detail. The EUR-L-TSE Strain Typing Expert Group (STEG) has preliminary classified the strain as not BSE, but BSE could not be fully excluded. Inoculation studies employing bioassay are ongoing in order to gain further information on the characteristics of this strain.

• The EFSA Cattle TSE Monitoring Model (C-TSEMM)

The BIOHAZ Secretariat provided a live demonstration of the functioning of the EFSA C-TSEMM. The impact of different monitoring options in the overall performance of a monitoring programme was modelled employing some fictitious scenarios. The practical demonstration on the functioning of the model was found interesting by the meeting participants.

• Update on activities of the EU-Reference Laboratory for Animal Proteins in Feedingstuffs (EURL-AP)

The representative from the EURL-AP provided an update on the recent EU regulatory instruments on certain aspects of testing for animal proteins in feedingstuffs. In particular, aspects of the proficiency testing done before the new legislation entered into force and specific methodological issues were presented. Further, experiences regarding limitations and findings during the first months of the implementation of the new regulation were discussed.

• Update on activities of the EU-Reference Laboratory and OIE-Reference Laboratory for TSEs (EURL-TSE)

The representative form the EUR-TSE presented the activities of this EU and OIE reference laboratory. The roles of this reference laboratory when acting as EURL or as OIE-RL were presented. The tasks and challenges addresses by the laboratory are very wide. These include, among others: keeping of TSE-related reference materials (i.e. tissues), participation in the rapid screening of tests and approval of minor testing kit changes and follow up of unusual samples with the STEG. A brief description of the current epidemiological situation in the EU and worldwide was presented. The issue of Atypical BSE in the context of the current BSE epidemiological situation was discussed, emphasising the need for characterising isolates which is now required by regulations in the EU. Further issues beyond TSE diagnostics were also presented in detail, in particular experimental research on clinical aspects of different types of TSEs in sheep.
Update on the activities of the European Commission in the field of BSE-TSE

The representative from DG-SANCO provided a comprehensive review of recent (completed and ongoing) risk-management activities in different BSE-TSE related fields, which are coordinated by this Directorate General of the European Commission. A short update on activities in the Directorate General on Research and Innovation was also presented.

In addition to these discussion topics, the participants exchanged information on the risk assessment activities carried out since the last meeting at MS level and in EFSA. Details on some recent and planned TSE-related scientific publications were shared, in particular from Belgium and France.

The minutes of this meeting are published on the BSE Network section of the EFSA website.4

3. Planned Network activities for 2014

The period covering the current Mandate of the EFSA Scientific Network on BSE-TSE is expiring by the end of 2013.

The BIOHAZ Secretariat presented a draft reviewed mandate and terms of reference for the Network. This review followed from an analysis made in EFSA aiming at harmonising networking activities, which took into account recommendations received from Members of EFSA Networks through a questionnaire circulated in fall 2012 from the Secretariat of the EFSA Unit on Advisory Forum and Scientific Cooperation. The revised mandate and terms of reference were endorsed by the Members of this Network with some minor changes. Following this, a new mandate from EFSA will be sought in order to request the continuation of the EFSA Scientific Network on BSE-TSE.

A discussion followed on issues for future consideration in the frame of this Network. These included the following:

- Include the possibility for inviting representatives from other countries or international organisations in order to have first-hand information on issues related to BSE and other animal TSEs.

- Give consideration to issues related to animal by-products and find points of common interest that could be considered in this Network or in a parallel EFSA Network.

- Encourage further active participation of members and observers in the agenda of the 2014 meeting. The Members and Observers of the Network found that exchanging knowledge in the context of the meeting of this EFSA Network was overall useful.

Those considerations made will be taken into account in the EFSA Secretariat when proposing and preparing future activities of this Network.

The Network Members and Observers expressed their interest in continuing having a yearly meeting. It was noted that it was the last meeting Prof. Budka was attending as the Network representative for Austria. The Network gratefully acknowledged his contribution throughout these years.

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4 Available at: http://www.efsa.europa.eu/en/events/event/131008-m.pdf (last visited on 09/12/2013)