



## **BSE AND GOATS**

### **Issue**

The Department for Environment, Food and Rural Affairs (Defra) and the Food Standards Agency (FSA) announced on the 8<sup>th</sup> February 2005 that a UK goat, confirmed in 1990 as having a TSE presumed on the best available evidence at the time to be scrapie, may have had BSE (Annex 1). This announcement was made following preliminary work performed by scientists at the Veterinary Laboratories Agency (VLA) where immunohistochemistry (IHC) has been applied to two historical samples.

This follows the recent confirmation of BSE in a French goat slaughtered in 2002 and tested as part of the EU-wide TSE surveillance programme.

### **Points for Discussion by the Committee**

Both Defra and FSA would be grateful for views on this recent development and more specifically would welcome comments on:-

- Future research needs relating specifically to the possible case of BSE in a UK goat
- EFSA is currently undertaking a full assessment of the BSE-related risk associated with the consumption of goat meat and goat meat products. In relation to the UK, has the Committee any comment on the level of current risk?

## **Background**

### **Possible BSE in a UK Goat**

#### **Introduction**

Martin Jeffrey at VLA-Lasswade, Edinburgh has developed a immunohistochemistry (IHC) method to discriminate between BSE and scrapie in sheep. This method was recently shown to be discriminatory in an EU evaluation of discriminatory methods, together with two Western immunoblotting methods and an ELISA based-method. All of these methods are now recommended for use in the examination of samples that test positive in the EU-wide surveillance programme for TSEs in small ruminants. The Community Reference Laboratory's Expert Group have agreed that none of the three in isolation is sufficient to confirm the presence of BSE and all three need to agree before a sample is confirmed as being indicative of BSE. This has now been set out in a Commission Regulation<sup>1</sup>.

Although IHC was not used to evaluate the recent French case of BSE in a goat, because brain tissue had not been stored in preservative and only frozen brain material was available which could not be used, the VLA have considered whether the method could be applied to goats as well as sheep. To achieve this the VLA examined brain tissue from goats that had been experimentally infected with BSE or scrapie, and compared them with two archived brain samples from scrapie-affected goats, namely:-

- Five experimental BSE in goat samples provided by the IAH
- Five SSBP-1<sup>2</sup> goat samples provided by the IAH (an experimentally transmitted isolate of scrapie)
- Two historical samples of goat TSE (presumed scrapie) retained at VLA Lasswade

One of these latter samples, first reported to a veterinary centre in Scotland in 1990, has given an IHC result which is indistinguishable from the experimental BSE in goat samples (note – only the one method has been applied).

Because of the age of the sample the VLA only have fixed material. This means that they will not be able to perform any of the other molecular tests, such as Western blot and ELISA. The only way that this sample can be confirmed to be from a BSE infection is for some of the fixed material to be inoculated into mice.

VLA-Weybridge is also retrieving as many goat samples as it can identify in its archive to process in a similar fashion. Only eight goat TSE cases have been confirmed since January 1993 when scrapie became notifiable. None of the

---

<sup>1</sup> Exact details of the Regulation can be found at [http://europa.eu.int/eur-lex/lex/LexUriServ/site/en/oj/2005/l\\_010/l\\_01020050113en00090017.pdf](http://europa.eu.int/eur-lex/lex/LexUriServ/site/en/oj/2005/l_010/l_01020050113en00090017.pdf)

<sup>2</sup> Sheep Scrapie Brain Pool 1 (SSBP-1) is a highly characterised pool of scrapie strains used by the IAH, which they routinely use in their experimental challenge work.

examinations done so far have been sufficiently well peer-reviewed to enable the results to be reported, but none so far appear to look like BSE.

### Herd of Origin

The male goat was born in March 1987 and was sold in May 1988. The animal was subsequently euthanased in 1990 after showing clinical signs consistent with scrapie, and the Scottish Agricultural College/VLA-Lasswade confirmed a scrapie-like infection by histopathological examination of fixed brain material. The goat was fed oats and barley mix supplemented with concentrate mix. The originator herd where the animal was bought from is no longer in existence. The owner of the goat when it developed disease has since moved the herd to new premises. There are some progeny, up to 6th generation, of the original goat in the current herd of six or seven animals but no further reports or suspicion of neurological or wasting disorders amongst these animals. No sheep or cattle were present on the holding in 1990 (the land is now used for non-agricultural purposes) or are present on the holding of the current herd. No goat meat, milk or milk products are sold into the human food chain from the herd.

### Surveillance in the UK

In 2002, the European Commission initiated a programme of TSE surveillance for small ruminants aged over 18 months based on samples collected from abattoirs and fallen stock. In 2004, the UK was not required to test goats at abattoirs but was required to test 500 fallen goats.

		Year	Numbers Tested	Positive
<b>Goat</b>	<b>Abattoir</b>	2002	9	0
		2003	191	1
		2004	90	0
		2005	43	0
		<b>Total</b>	<b>333</b>	<b>1</b>
	<b>Fallen Stock</b>	2002	3	0
		2003	53	0
		2004	49	0
		2005	1	0
		<b>Total</b>	<b>106</b>	<b>0</b>

Results of the abattoir and fallen stock survey

Following the recent confirmation of BSE in a French goat from 2002, enhanced testing of goats to establish the level of TSEs in the current EU goat population was agreed in early February. Sample size has been based on the level of BSE in the member state and the size of its goat population. The UK will now have to test:-

- all goats aged over 18 months slaughtered for human consumption (it is estimated that this will be approximately about 3000 goats per annum)
- 1000 fallen goats over 18 months

If member states have difficulty obtaining their quotas of abattoir samples, they can substitute additional fallen stock on a one to one basis.

Defra is consulting the goat industry on how best to implement these new requirements. Defra envisage making it a legal obligation on goat keepers to notify all fallen goats aged over 18 months. All goats are already being tested in 13 abattoirs where sheep are being sampled. This surveillance will be extended to other key abattoirs as soon as possible but, in view of the difficulties in testing all goats slaughtered in any abattoir, Defra may wish to substitute some additional fallen stock.

### **UK goat population**

The UK census indicates that there are about 88,000 goats, half of which are breeding animals. In England and Wales there are 30,000 milk producing goats. The level of goat meat production in the UK is relatively low with only 7,699 slaughtered in licensed abattoirs in 2003/04. Levels of goat cheese production in the UK are estimated to be 1,800 tonnes per annum with about 10,000 tonnes of goats milk consumed per annum, in comparison with several million tonnes of cows milk.

All TSE legislation that applies to sheep also applies to goats (except that goats do not carry the ARR genotype that confers scrapie resistance to sheep). This includes the UK feed ban in 1988 and the reinforced feed ban in 1996, and the removal and destruction of specified risk material (SRM). SRM for sheep and goats is listed in Annex 2.

### **Confirmed BSE in a French Goat**

#### **Background**

This goat was born March 2000 and slaughtered in October 2002 when it was TSE tested as part of the EC requirement for random testing of healthy sheep and goats. On the basis of initial tests to differentiate BSE and scrapie it was decided that strain typing by mouse bioassay was needed. Following an analysis of these results and from the results of further tests, as requested by the Central Reference Laboratory's Expert Group on TSE strains, the Expert Group concluded that 'the French caprine isolate (CH636) is likely to contain the BSE strain'. (These tests did not include IHC on the original sample because no fixed brain tissue was available).

Material from this goat did not enter the food chain. It was one of total herd of 600 goats (300 adults and 300 below reproductive age), all of which were slaughtered and tested for TSE. All test results were negative.

No meat or live goats have been imported from France since 1997. The levels of French goat cheese imported into the UK are uncertain but are not insignificant.

The goat was tested as part of an EU-wide TSE surveillance programme on samples collected from abattoirs and fallen stock. Within this programme

some 140,000 goats (60,000 of which were in France) have been tested, of which 134 were found to be TSE positive. Thirty of these have been subjected to discriminatory testing yielding only the one BSE positive from France.

**Statements from the European Food Safety Authority on the finding of BSE in the French goat**

As a result of the November 2004 announcement of the possible finding of BSE in the French goat and the confirmation of this finding in January 2005 the European Food Safety Authority (EFSA) was asked by the EC to provide an opinion on the risk posed by goat meat and milk, and products derived from them. The EFSA opinion of 26/11/04 (Annex 3) concluded that 'in the light of current scientific knowledge and irrespective of their geographical origin, milk and milk derivatives (eg lactoferrin, lactose) from small ruminants are unlikely to present any risk of TSE contamination provided that milk is sourced from clinically healthy animals.'

EFSA also launched a feasibility study to check availability and usefulness of existing or new data and to collect information to form the basis for carrying out a quantitative assessment of the risks involved in the consumption of goat meat and goat meat products. The responses to this were discussed at a working group meeting on this subject on 11/01/05. It is hoped that this risk assessment will be completed by July 2005.

In a further statement on 28/01/05 (Annex 4) EFSA recognised that there are significant gaps in the knowledge needed to carry out a quantitative risk assessment. In particular the data on consumption of goat meat and products, the prevalence of natural BSE in goats and the distribution of infectivity in goat tissues.

**SEAC advice**

SEAC's previous consideration of risks should BSE be found in small ruminants is given in Annex 5.

**SEAC 86/4  
Annex 1**

Nobel House  
17 Smith Square  
London SW1P 3JR

**Telephone** 020 7238 1134  
**Fax** 020 7238 5529  
**Out of hours telephone** 020 7270 8960  
**Out of hours fax** 020 7270 8125  
**Website** [www.defra.gov.uk](http://www.defra.gov.uk)



## **News Release**

*News Release ref : 58/05  
Date: 8 February 2005*

### **POSSIBLE BSE IN A 1990 UK GOAT SAMPLE**

Scientists at the Veterinary Laboratories Agency have informed Defra that a goat, confirmed as having scrapie in 1990, may have had BSE.

More sensitive testing methods have found the sample had traits similar to samples from goats experimentally infected with BSE. Further tests will now be carried out.

The VLA made the finding following the recent case of BSE in a goat from France. The VLA had been checking whether methods developed to discriminate between scrapie and BSE in sheep could also differentiate these diseases in a goat.

The goat appears to have originated from premises in Scotland; investigations have revealed that the original keeper is no longer in business at these premises.

The single result, using just one test method, is insufficient to confirm that the goat had BSE, and further rapid molecular methods to discriminate BSE and scrapie cannot be applied because no frozen tissues are available.

Researchers from the VLA have been asked to carry out tests to follow up these initial findings. Further work will now need to be performed and this will take 1-2 years, at the earliest, to complete.

## **SEAC 86/4 Annex 1**

Defra's Chief Veterinary Officer, Debby Reynolds, said: "It is important to put this initial finding into context. It dates back to 1990 which was at the height of the BSE outbreak in cattle and before the reinforced feed ban was introduced in 1996. This means that there is a distinct possibility that the animal, if infected with BSE, was exposed to contaminated feed.

"In light of the recent case of BSE in a goat from France, the European Commission says it is important to perform increased surveillance on goats on a European-wide basis to establish the current incidence of TSEs in the goat population. In line with this, Defra will be stepping up its TSE surveillance programme for goats."

Defra will be asking the Spongiform Encephalopathy Advisory Committee for their comments on this finding at their meeting on the 3<sup>rd</sup> March.

### **NOTES TO EDITORS**

1. Further details about the case of BSE in a French goat detected in 2002 can be found on the European Commission's web site at:-  
<http://europa.eu.int/rapid/pressReleasesAction.do?reference=IP/05/105&format=HTML&aged=0&language=EN&guiLanguage=en>
2. More details concerning the feed ban is available on the Defra web site:-  
<http://www.defra.gov.uk/animalh/bse/controls-eradication/feed-ban.html>
3. General information relating to BSE can be found at:-  
<http://www.defra.gov.uk/animalh/bse/index.html>
4. General information relating to scrapie can be found at:-  
<http://www.defra.gov.uk/animalh/bse/othertses/scrapie/index.html>

**Press enquiries** 020 7238 6094 ; **Public enquiries** 08459 335577;

**Press notices are available on our website**

[www.defra.gov.uk](http://www.defra.gov.uk)

**Defra's aim is sustainable development**

End



## **Possible finding of BSE in a 1990 UK goat**

### **Agency not advising against eating goat meat or dairy products**

Tuesday, 08 February 2005

**Ref: R1076 - 38**

The FSA has been informed by Defra that a sample, reportedly taken from a Scottish goat (1) that died in 1990, has shown that the goat may have had BSE (2). Archived tissues from this animal were recently tested by Defra's Veterinary Laboratory Agency but confirmation of BSE requires further tests and these will take up to two years.

Few if any goats from 1990 are likely to still be alive today and BSE has not been found in the current UK goat population. It may be possible for BSE in goats to pass down through the generations and the current precautionary controls would not remove all infectivity from the goat meat were the animal to enter the food chain. However, animals that show visible signs of TSEs (3), which includes BSE, are not permitted to enter the food chain.

If confirmed, this Scottish case would be the second goat to test positive for BSE, following confirmation on 28 January 2005 that a French goat that died in 2002 had BSE. Since 2002, 140,000 goats have been tested for TSEs across Europe and no cases of BSE have been identified, except for the French case. The European Commission is stepping up the goat-testing programme to determine whether this is an isolated incident.

There is scientific uncertainty in this area. However, the most recent advice (4) on dairy products from the European Food Safety Authority (EFSA) states that milk and milk products from goats are unlikely to present any risk of TSE contamination provided the milk is sourced from healthy animals, irrespective of country of origin. EFSA is continuing to work on a risk assessment in relation to goat meat. The Agency will also be seeking scientific advice from its own independent experts SEAC (5). There have been no goat meat imports from France into the UK since 1997.

On the basis of the current evidence, the Agency is not advising people against eating goat meat or products, including dairy products.

The Scottish goat died six years before a full ban on the use of potentially BSE infected feed to farmed animals was introduced in the UK in 1996. This ban was subsequently extended across Europe in 2001. The ban prevents the spread of BSE infection to animals through feed.

The Agency is working closely with the European Commission and other member states to consider what further action may be required in the light of the results of increased testing.

The Agency will issue further information and advice as appropriate.

#### **Footnotes**

(1) VLA is looking to conduct further tests to confirm that the sample tissue is from a goat.

(2) Defra press release can be found at [Defra's website](#)

(3) TSE, Transmissible Spongiform Encephalopathy, is a disease of the neurological system where there is spongy degeneration of the brain and progressive neurological deterioration. Scrapie is a TSE that is known to infect sheep and goats. BSE, which affects cattle, is also a TSE. Goats showing signs of TSEs are not permitted to enter the food chain.

(4) EFSA advice can be found at the [EFSA website](#)

## **SEAC 86/4 Annex 1**

(5) SEAC – the Spongiform Encephalopathy Advisory Committee – was set up in 1990 and provides independent scientific advice to the Food Standards Agency and other Government Departments on BSE and other spongiform encephalopathies.

### **▣ BSE and goats – your questions answered**

[ENDS]

Room 245 Aviation House,  
125 Kingsway,  
London WC2B 6NH

Telephone: 020 7276 8888  
Out of hours duty pager: 07626 414243  
Fax: 020 7276 8833  
Email: [press.mailbox@foodstandards.gsi.gov.uk](mailto:press.mailbox@foodstandards.gsi.gov.uk)

© Crown Copyright

<u>Specified Risk Material</u>	
<b><u>Cattle born, reared and slaughtered in the UK</u></b>	<p><b>All ages</b></p> <ul style="list-style-type: none"> <li>The tonsils and intestine from the duodenum to the rectum; and the mesentery;</li> </ul> <p><b>Over 6 months</b></p> <ul style="list-style-type: none"> <li>The entire head (excluding the tongue, but including the brain, the eyes, trigeminal ganglia), thymus, spleen and spinal cord.</li> </ul> <p><b>Over 30 months</b></p> <ul style="list-style-type: none"> <li>The vertebral column, excluding the vertebrae of the tail, the spinous and transverse processes of the cervical, thoracic and lumbar vertebrae and the median sacral crest, the wings of the sacrum, but including the dorsal root ganglia. - in the UK this only applies to Beef Assurance Scheme animals, all other cattle over 30 months of age are excluded from the food chain.</li> </ul>
<b><u>Cattle all member states except UK</u></b>	<p><b>All ages</b></p> <ul style="list-style-type: none"> <li>The tonsils, the intestines, from the duodenum to the rectum, and the mesentery;</li> </ul> <p><b>Over 12 months</b></p> <ul style="list-style-type: none"> <li>Skull excluding the mandible but including the brains and eyes, and spinal cord .</li> </ul>
<b><u>Cattle (in all Member States except UK and Sweden)</u></b>	<p><b>Over 12 months</b></p> <ul style="list-style-type: none"> <li>Vertebral column, excluding the vertebrae of the tail the spinous and transverse processes of the cervical, thoracic and lumbar vertebrae, the median sacral crest and the wings of the sacrum, but including the dorsal root ganglia .</li> </ul>
<b><u>Sheep and goats (applies to UK and all other Member States)</u></b>	<p><b>All ages</b></p> <ul style="list-style-type: none"> <li>The spleen and the ileum</li> </ul> <p><b>Over 12 months (or with a permanent incisor erupted)</b></p> <p>Skull including the brains and eyes, tonsils, spinal cord.</p>

**European Food Safety Authority**

Brussels, 26 November 2004

**Statement  
of the EFSA Scientific Expert Working Group on BSE/TSE  
of the Scientific Panel on Biological Hazards  
on the health risks of the consumption  
of milk and milk derived products from goats**

The former Scientific Steering Committee of the European Commission and recently the European Food Safety Authority (in its opinion related to TSE surveillance and product safety in small ruminants) have recommended that research should intensify on the safety of milk of small ruminants with regard to TSE risks. Despite these repeated recommendations there is very limited published research data on TSE in goats and infectivity of goat products. Although limited new data are expected to be published in the near future, there is still little research initiated in this area.

Some research data support the finding that milk, colostrum and tissues of the mammary gland from bovines can be classified in the category of no detectable infectivity. However, based on a number of observations from research data, mainly research concerning sheep, there are indications that infectivity in the milk from small ruminants cannot be totally excluded. In case of mastitis, one could expect an infiltration of potentially infected blood into the milk as the blood-milk barrier may not or only partly exist. But even in the case of absence of mastitis the barrier may not be 100% effective.

From the limited data available today it is concluded that in the light of current scientific knowledge and irrespective of their geographical origin, milk and milk derivatives (e.g. lactoferrin, lactose) from small ruminants are unlikely to present any risk of TSE contamination provided that milk is sourced from clinically healthy animals. Exclusion of animals with mastitis is considered to reduce the potential risk. Further assurance of healthy milk could include milk tests for total somatic cell counts indicative of inflammation.

## European Food Safety Authority

### SCIENTIFIC PANEL ON BIOLOGICAL HAZARDS

Brussels 28 January 2005

#### **Statement on the assessment of safety with respect to the consumption of goat meat and goat meat products in relation to BSE/TSE”**

Following the findings of a research group in France concerning a suspected case of Bovine Spongiform Encephalopathy (BSE) infection in a goat, EFSA was asked by the Health and Consumer Protection Directorate General (DG SANCO) of the European Commission, and subsequently by the European Parliament, to provide scientific advice on the human health risks related to the consumption of goat milk and goat meat. This case, identified as a TSE in a normal slaughter goat in the course of active surveillance in 2002, was confirmed by subsequent molecular phenotyping and a two-year bio-assay as indistinguishable from a BSE infection. EFSA's Scientific Panel on Biological Hazards (BIOHAZ) undertook to update previous opinions related to risks associated with the consumption of goat and sheep products in the event that BSE were to be confirmed in the goat concerned. In light of the conclusions of the Community Reference Laboratory's expert panel confirming the presence of BSE infection in the goat ([http://europa.eu.int/comm/food/food/biosafety/bse/crl\\_statement\\_tse\\_goats\\_28-01-05\\_en.pdf](http://europa.eu.int/comm/food/food/biosafety/bse/crl_statement_tse_goats_28-01-05_en.pdf)) the BIOHAZ Panel outlines the current state of knowledge and affairs concerning the assessment of BSE-related risks with respect to the consumption of goat meat and goat meat products.

With regards to possible health risks associated with the consumption of milk and milk products derived thereof, EFSA's Scientific Expert Working Group on BSE/TSE of the BIOHAZ Panel published preliminary advice on 26 November 2004 [http://www.efsa.eu.int/science/biohaz/biohaz\\_documents/709/bdoc\\_statement\\_goatsmilk\\_en1.pdf](http://www.efsa.eu.int/science/biohaz/biohaz_documents/709/bdoc_statement_goatsmilk_en1.pdf). Experts agreed that: *“...in light of current scientific knowledge and irrespective of their geographical origin, milk and milk derivatives (eg lactoferrin, lactose) from small ruminants are unlikely to present any risk of TSE contamination provided that milk is sourced from clinically healthy animals.”*

With regards to the provision of scientific advice related to the safety of goat meat and goat meat products, and following a feasibility study, the BIOHAZ Panel confirmed that significant gaps exist in the information required to carry out a quantitative risk assessment with regards to BSE/TSE. In particular, the Panel highlighted the absence of information regarding consumption of goat meat and goat meat products and other data required to assess exposure, particularly the true prevalence of BSE infection in goats under natural conditions and the distribution of infectivity in goat tissues.

From the epidemiological data available today, no link is indicated between goat meat and meat product consumption and variant Creutzfeldt Jakob Disease (vCJD). However, the BIOHAZ Panel recognises the lack of knowledge with respect to the incubation period of vCJD and exposure levels of the human population which limits confidence in this observation.

The advice on safety of goat products as concluded in the opinion of the Scientific Steering Committee (SSC) opinion of April 2002 on “Safe sourcing of small ruminants' material” and reiterated by the Opinion\* of the Scientific Panel on Biological Hazards of the European Food Safety Authority on “The interpretation of results of EU surveillance of transmissible spongiform encephalopathies (TSEs) in ovine and caprine animals, culling strategies for TSEs in small ruminants and the TSE-related safety of certain small ruminant products” adopted on 26

November 2003, remains valid. However, the BIOHAZ panel and further recognises that more information is needed to assess the significance of the single French case recognizes the need to carry out a quantitative risk assessment concerning BSE-related risks associated with the consumption of goat meat and goat meat products. This is expected to be completed by July 2005 if pertinent data will become available.

\* "The current document might be appropriately updated when ..~....reliable data on the prevalence become available".

## 1. Background

Following the earlier announcement of a suspected case of BSE infection in a goat (28 October 2004) and the preliminary and final confirmation by the Community Reference Laboratory (CRL), on 25 November 2004 and 28 January 2005 respectively, and taking into account the formal mandate from the Health and Consumer Protection Directorate General of the European Commission (DG SANCO) (D(2004) DS/cm/421319) of the European Commission requesting EFSA's Scientific Panel on Biological Hazards for an opinion **on a "Quantitative assessment of risk posed to humans by tissues of small ruminants (SMRU) in case BSE is present in these animal populations"** and a similar mandate from the European Parliament (EP) (letter 314273 of 21.12.2004), the following update on the state of play is provided.

### Overview of actions taken by EFSA

**EFSA launched a series of actions following the announcement by the French Authorities of a suspected case of BSE infection in a goat. These actions focused on the collection of scientific data and other information from scientists as well as from food safety authorities and research institutes in Member States in order to be able to carry out a quantitative risk assessment with regards to the possible risks involved in the consumption of goat products should a BSE infection be confirmed.**

1. A feasibility study was launched on 30 October 2004. to check the availability and usefulness of existing or new scientific data and to collect other information as the basis for carrying out a quantitative assessment of the risks involved in the consumption of goat products.
2. Questions were sent to the European Commission (DG Sanco and DG RTD) asking that EFSA be provided with relevant data relating ongoing scientific experiments and on statistics of goats and sheep i.e. numbers tested for TSE/BSE and results in the Member States taking account of genotypes.
3. Letters were sent to EFSA's Advisory Forum on 3rd of November 2004 and 30th of November 2004 in order to request that Member States and their national reference laboratories and different research institutes to provide EFSA with an update on any planned or on-going scientific research at national level linking BSE and small ruminants, including studies on the infectivity of milk.
4. A letter was sent to different leading European experts seeking their contribution on an update of scientific knowledge related to opinions available on the subject; new findings arising from the review of scientific literature, research projects ongoing, and where available, intermediate results or an indication of the timing of future results.

**Outcome of all consultations:** A summary of all contributions received was discussed at the first meeting (11<sup>th</sup> January 2005) of the working group on "Quantitative assessment of risk posed to humans by tissues of small ruminants (SMRU) in case BSE is present in these animal populations".

## **2. Assessing the safety of goat meat and goat meat products with regards to TSE/BSE: state of play and future developments.**

Following the first meeting of the working group (11<sup>th</sup> January 2005) constituted to address the specific mandate with respect to the safety of goat meat and goat meat products, the expert group outlined its first conclusions concerning how best to address the task at hand:

1. A full assessment of the feasibility of conducting a quantitative assessment of the risks involved in the consumption of goat products is, given the lack of new published information and the limitation of previous data, dependent to a great extent on the availability of unpublished findings from Member States and third countries. Key inputs considered indispensable for carrying out a quantitative risk assessment are data related to:
  - a. The species barrier
  - b. Infectious load and distribution in goat tissues
  - c. Prevalence of infection
  - d. Human consumption levels.

If such data are not forthcoming or prove to be insufficient, there would be no basis on which to conduct a quantitative risk assessment (QRA) relative to the consumption of goat meat and goat meat products. Should this be the case, measures for the safe sourcing of small ruminant materials should be reviewed in respect to the level of BSE infection in goats.

2. The epidemiological data available provided by the surveillance of variant Creutzfeldt Jakob Disease (vCJD) indicate that there is currently no evidence of a link between goat meat consumption and a higher risk of vCJD in certain ethnic groups (likely to consume more goat meat) of the UK population as compared with other groups. Similarly there is also no observed link on the occupational risk of handling goat meat and goat meat products in the UK. Such epidemiological analyses should also be made in other countries where BSE has been found. However, the BIOHAZ Panel recognises the lack of knowledge with respect to the incubation period of vCJD and exposure levels of the human population which limits confidence in these observations.
3. In addition to the quantitative risk assessment to be carried out by EFSA, DG SANCO of the European Commission introduced a three step testing scheme\* in sheep and goats (EC regulation No 36/2005) and announced today an increased monitoring programme in goats. These measures will provide more data on the real prevalence of suspected TSE cases (and possible BSE infections) in goats. It is anticipated that the mid-term evaluation of the results of this increased surveillance (after 6 months) will concur with EFSA's opinion on the safety of goat meat and goat meat products. EC regulation 999/2001 further specifies safety measures already in place, such as the condemnation of the carcass of cattle, sheep and goats in case of a confirmed positive TSE case and the removal at slaughter of Specified Risk Materials (SRM) from cattle, sheep and goats.

\*three step testing : rapid testing, discriminatory molecular testing and mouse bio assay testing.



## Summary of previous SEAC consideration of risks should BSE be found in small ruminants

### 1. In April 2002 SEAC concluded:

- In line with previous SEAC advice, only animals carrying the ARR allele should enter the food chain.
- On a precautionary basis, the 12-month cut off previously advised by SEAC remained appropriate for ARR heterozygotes. However, in view of existing SRM regulations there was no justification for any age cut off in ARR homozygotes.
- In line with SEAC advice in 2001, only milk from ARR homozygote sheep can be considered as highly unlikely to contain the infectious agent. Further experimental work was required before potential risks from small ruminant milk from goats and semi-resistant or susceptible sheep could be excluded.

### 2. In June 2003 SEAC agreed there was no change in the risk associated with consumption of milk from ARR homozygous sheep, and endorsed its previous advice of April 2002.

### 3. In September 2004 data were presented to SEAC on the possible maximum prevalence of BSE in the GB sheep flock. A statistical analysis of these data, using an approach similar to that of Gravenor *et al.* (2003)<sup>3</sup>, which assumed a skewed distribution in the data, had provided two estimates of the possible proportion of the scrapie cases that could be BSE: 0.14% based on the number of scrapie cases and 0.66% based on the number of flocks. SEAC generally

---

<sup>3</sup> Gravenor *et al.* (2003) Searching for BSE in sheep: interpreting the results so far. *Vet. Rec.* 152, 298-299.

accepted the approach used to model the possible prevalence of BSE in sheep, but noted that:

- The model depended on the ability of the tests used to effectively detect and discriminate between scrapie and BSE;
  - Using the number of TSE affected flocks in the calculation of prevalence was preferable to using individual TSE cases.
4. In November 2004 SEAC was informed of the finding of possible BSE in a French goat. Although the data available at that time were consistent with BSE, a definitive interpretation could not be provided until further data from mouse bioassays were available. In January 2005 the TSE Community Reference Laboratory Expert Group on Strains confirmed the presence of TSE infection in the French goat.