

**Opinion of the**  
**Scientific Steering Committee**  
**on the**  
**GEOGRAPHICAL RISK OF**  
**BOVINE SPONGIFORM**  
**ENCEPHALOPATHY (GBR) in**  
**ISRAEL**

Adopted by the SSC on 13 September 2002

## **Opinion of the Scientific Steering Committee on the GEOGRAPHICAL RISK OF BOVINE SPONGIFORM ENCEPHALOPATHY (GBR) in ISRAEL – September 2002**

### **THE QUESTION**

The Scientific Steering Committee (SSC) was asked by the Commission to provide an up-to-date scientific opinion on the Geographical BSE risk (GBR), i.e. the likelihood of the presence of one or more cattle being infected with BSE, pre-clinically as well as clinically, in countries that have formally requested the determination of their BSE status in accordance with Article 5 of the Regulation (EC) No 999/2001 of the European Parliament and of the Council.

This opinion addresses the GBR of Israel as assessed in September 2002.

### **THE ANSWER**

It is likely that the BSE-agent was introduced in Israel, most probably before 1991, mainly due to animal meal imports from BSE risk countries. The significant external challenges met an extremely unstable system and most probably led to an internal challenge already in the early 80s, which then was recycled and amplified.

In 1996, rendering of cattle waste ceased and mammalian MBM was prohibited for all farmed animals in Israel. The stability of the system changed to very stable and the internal challenge of the Israeli BSE/cattle system is since then decreasing with the rate at which cattle born before 1996 leave the system. The risk that cattle from post-1996 birth cohorts have been exposed to the BSE-agent is depending on the risk that imported poultry meal, which was fed to cattle until 2001, was contaminated with the BSE-agent. In view of the measures taken by Israel to ensure the absence of mammalian MBM from imported animal meals, it is regarded unlikely but not excluded that imported poultry meal (often feather meal) could indeed have been contaminated.

On 28 May 2002, the first BSE case in Israel was identified in a 1992 born cow.

It is concluded that it is likely and confirmed at a lower level that domestic cattle are (clinically or pre-clinically) infected with the BSE-agent (**GBR III**).

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The SSC is aware that the available information was not confirmed by inspection missions as they are performed by the FVO in the Member States. It recommends that BSE-related aspects are included in the program of future inspection missions, as far as feasible.

### **THE BACKGROUND**

In July 2000 the SSC adopted its final opinion on "the Geographical Risk of Bovine Spongiform Encephalopathy (GBR)". It described a method and a process for the assessment of the GBR and summarised the outcome of its application to 23 countries. Detailed reports on the GBR-assessments were published on the Internet for each of these countries.

On 1 July 2001 Regulation (EC) No 999/2001 of the European Parliament and of the Council entered into force. This regulation lays down rules for the prevention, control and eradication of transmissible spongiform encephalopathies in animals (TSE Regulation). Appropriate risk management measures are defined in relation to the BSE Status category. In Annex II of this Regulation the method for the determination of the BSE status is described. It requires two steps, namely a risk assessment and the evaluation of specific criteria listed in annex II, chapter A, point (b) to (e). The Commission regards the GBR as provided by the SSC as an adequate Risk Assessment as required by the regulation. However, countries may also provide their own risk

assessment in which case the SSC will be requested to provide a scientific opinion on the validity of that risk assessment as well as of its result.

In January 2002 the SSC updated its opinion on the GBR and determined that exports from all countries classified as GBR III or IV pose a certain risk of carrying the BSE-agent, independent if they have or have not confirmed at least one domestic BSE case. The SSC also provided an estimate of the level of risk emitted from these “BSE risk countries” in relation to the time of export.

Israel has formally requested the determination of its BSE status in accordance with Article 5 of the TSE Regulation and subsequently the Commission asked the Scientific Steering Committee (SSC) to provide an scientific opinion on the Geographical BSE risk of Israel.

## THE RISK ASSESSMENT

For Israel, the SSC concluded that it is “likely and confirmed at a lower level” (**GBR III**) that domestic cattle in Israel are (clinically or pre-clinically) infected with the BSE-agent.

## THE ANALYSIS

### EXTERNAL CHALLENGE

The level of the external challenge that has to be met by the BSE/cattle system is estimated according to the guidance given by the SSC in its final opinion on the GBR of July 2000, as updated on 11 January 2002.

#### Live Cattle imports

Over the entire period 1980 to 2000 Israel has imported 29,431 (CD) live cattle from non-UK BSE-risk countries and 262 cattle from the UK itself (Eurostat and other data). A large fraction of these were imported for fattening and slaughter at less than 20 months of age. The accumulated external challenge from these cattle is moderate. Broken down to 5 years periods the external challenge from live cattle imports was very low from 1980-1990 and low thereafter.

#### MBM imports

Between 1980 and 2000 Israel has also imported 87,701 tons MBM from non-UK BSE-risk countries (Eurostat and other data) 52,742 tons from the UK itself (CD). Together the accumulated MBM imports represent a very high external challenge. Since December 1988 (for UK) and 1990 (for other countries), Israel took measures to ensure that all imported animal meals were of non-mammalian origin.

Broken down to 5 years periods the external challenge is assessed as moderate between 1980-1985, very high between 1986-1990. Since 1991, due to the measures in place in Israel since July 1990 to assure that imported MBM is of poultry origin only, it is assumed that the imports of MBM after 1990 only imposed a negligible challenge.

### STABILITY

On the basis of the available information it was concluded that the country’s BSE/cattle system was **extremely unstable** from **1980 to 1996**. The measures taken in 1996 to improve feeding (total feed ban) and the stop of rendering bovine material (partly already in 1995), made the system **very stable** from **1997 to 2000**. Since **7/2001**, when also the use of poultry meals for ruminant rations was ceased, the system can be regarded as **optimally stable**.

#### **Feeding**

Feeding of MMBM to cattle was allowed until 1996. Even if there is reason to assume that it was not widespread, it has to be assumed that it happened as long as MMBM was available in the country. Feeding is therefore “**not OK**” between 1980-1996. The efficiency of implementation of

the 1996 ban of mammalian MBM from farm animal feed cannot be judged, since there have been no official control measures instituted. In any case it is difficult to control contamination of poultry meal with mammalian meals. It also was argued that controls were not necessary as there was no MMBM available in the country since imports were already banned in 1990 (1988 for UK) and domestic rendering of mammalian material stopped in 1996. However, imported poultry meal could still have been contaminated. Feeding is therefore assumed to be “**reasonably OK**” from 1997 onwards until 7/2001 because poultry meal may still have been included in the cattle diet. Since 7/2001, feeding is regarded “**OK**”, due to the introduction of a law, which forbids feeding of animal meals to ruminants.

### **Rendering**

Rendering is assumed being “**not OK**” as long as bovine material was rendered, i.e. until 1996. Even if process conditions are still not according to the 133°C/20min/3bar-standard the control of the input material is assumed to ensure that no bovine material could enter the process any more since 1996. Rendering is therefore assessed as “**OK**” from **1997** onwards. However, if BSE infectivity would enter the process it would not be optimally reduced.

### **SRM-removal**

As long as bovine material was rendered it included SRM, (some) fallen stock and emergency slaughter. Therefore SRM removal was “**not OK**” until 1996. SRM-removal is assessed as “**OK**” from **1997** onwards because after this date SRM, fallen stock and emergency slaughter was buried, as rendering of bovine material ceased. Since 1/2001, fallen stock and emergency slaughters are incinerated.

### **BSE surveillance**

A good BSE surveillance enhances the stability of the system to some extent since 1988 and to a larger extent since 2001.

## **CONCLUSION ON THE CURRENT GBR**

It is likely that the BSE-agent was introduced in Israel, most probably before 1991, mainly due to animal meal imports from BSE risk countries. The significant external challenges met an extremely unstable system and most probably led to an internal challenge already in the early 80s, which then was recycled and amplified.

In 1996, rendering of cattle waste ceased and MMBM was prohibited for all farmed animals in Israel. The stability of the system changed to very stable and the internal challenge of the Israel BSE/cattle system is since then decreasing with the rate at which cattle born before 1996 leave the system. The risk that cattle from post-1996 birth cohorts have been exposed to the BSE-agent is depending on the risk that imported poultry meal, which was fed to cattle until 2001, was contaminated with the BSE-agent. In view of the measures taken by Israel to ensure the absence of MMBM from imported animal meals, it is regarded unlikely but not excluded that imported poultry meal (often feather meal) could indeed have been contaminated.

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## **EXPECTED DEVELOPMENT OF THE GBR**

In view of the negligible risk that domestic cattle have been infected after 1996, the GBR in Israel will continue to decrease with the disappearance of the pre-1997 birth cohorts. The voluntary ban of all animal meals, including non-mammalian meals, from cattle feed (4/2001) and the recent

official ban of feeding of animal meals to ruminants (15 July 2001), will allow the GBR to decrease fast.

*A table summarising the reasons for the current assessment is given in annex 1 to this opinion. A detailed report on the assessment of the GBR of Israel as produced by the GBR-Peer Group is published separately on the Internet. The country had opportunities to comment on different drafts of the report before the SSC took both, the report and the comments, into account for producing this opinion. The SSC appreciates the good co-operation of the country's authorities.*

ISRAEL – Summary of the GBR-Assessment, September 2002							
	EXTERNAL CHALLENGE		STABILITY				INTERACTION of EXTERNAL CHALLENGE and STABILITY
	1980-1985: Moderate 1986-1990: Very high 1991-2000: Low		1980-1995: Extremely unstable 1996-2000: Very stable 2001: Optimally stable				Before 1991, an extremely unstable system was exposed to a moderate (1980-1985) and then very high (1986-1990) external challenge. It is therefore likely that the BSE-agent entered the country and was recycled and amplified from the early 80s until 1997, when the system became very stable.
GBR-Level	Live Cattle imports	MBM imports	Feeding	Rendering	SRM-removal	BSE surveillance	
<b>III</b>	UK: No imports according to country import data and 262 according to Eurostat and other data.	UK: 52,742 t according to country import data and 45,864 t according to Eurostat and other data. All identified as poultry meal, apart from 1,505 tons imported in 1989.	<b>Not OK: 1980-1996, Reasonably OK: 1997-2000, OK since 7/2001.</b> <ul style="list-style-type: none"> <li>Feeding MMBM to cattle was allowed until 1996 and, even if not widespread, it probably happened as long as MMBM was available in the country.</li> <li>1996 ban of MMBM from farm animal feed.</li> <li>Efficiency of this ban cannot be judged, as no official control measures instituted, because importation of MMBM was banned since 1990 and domestic MMBM production ceased in 1996.</li> <li>Since 7/2001, law prohibits feeding of any animal meals to ruminants.</li> </ul>	<b>Not OK: 1980-96, OK: since 1997.</b> <ul style="list-style-type: none"> <li>Rendering of bovine material prohibited since 8/1996.</li> <li>Only poultry offal as raw material. Highly unlikely that ruminant material could be rendered.</li> <li>Process conditions still not according to 133°C/20min/3bar-standard.</li> </ul>	<b>Not OK: 1980-96, OK: since 1997.</b> <ul style="list-style-type: none"> <li>As long as bovine material was rendered it included SRM, (some) fallen stock and emergency slaughter.</li> <li>Since 1996, SRM, fallen stock and emergency slaughter buried, when rendering of bovine material ceased.</li> <li>Since 1/2001, fallen stock and emergency slaughter incinerated.</li> </ul>	<ul style="list-style-type: none"> <li>BSE listed as notifiable disease since 1992.</li> <li>Compensation scheme exists since then.</li> <li>Very close supervision of dairy cattle by official veterinarians, trained on BSE signs since 1987.</li> <li>Active surveillance since 1994 but rather low numbers.</li> <li>On 28 May 2002, the first BSE case was identified in Israel in a 1992 born domestic cow.</li> </ul>	
<b>decreasing</b>	<u>Other BSE risk countries:</u> 29,431 according to the country import data. According to Eurostat and other data, 13,618 from CY, PL, CZ, HU, FR, DE, IT, NL and RO.  A large fraction of imports for immediate slaughter or fattening.	<u>Other BSE risk countries:</u> Country Data: 80-85: 0 t 86-90: 46,455 t 91-95: 20,716 t 96-2000: 2,144 t Total: 69,315 t Eurostat and other data: 80-85: 3,283 t 86-90: 54,648 t 91-95: 22,736 t 96-2000: 7,034 t Total: 87,701 t  No MMBM imports permitted from the UK since 1988 and from all other countries since 1990.				<p style="text-align: center;"><b>INTERNAL CHALLENGE</b></p> An internal challenge is likely to have been present and growing since the early 80s. Since 1997, it should be declining because new infection became unlikely. However, an internal challenge is likely to be present as long as cattle born before 1997 are alive in the country. This assessment is confirmed by the recent detection of BSE in a cow born in 1992.	