

**FINAL REPORT**

**ON THE ASSESSMENT**

**OF THE**

**GEOGRAPHICAL BSE RISK OF**

**EL SALVADOR**

**JUNE 2001**

**NOTE TO THE READER**

Independent experts have produced this report, applying an innovative methodology by a complex process to data that were voluntarily supplied by the responsible country authorities. Both, the methodology and the process are described in detail in the final opinion of the SSC on "the Geographical Risk of Bovine Spongiform Encephalopathy (GBR)", 6 July 2000. This opinion is available at the following Internet address:

**<[http://europa.eu.int/comm/food/fs/sc/ssc/outcome\\_en.html](http://europa.eu.int/comm/food/fs/sc/ssc/outcome_en.html)>**

In order to understand the rationale of the report leading to its conclusions and the terminology used in the report, it is highly advisable to have read the opinion before reading the report. The opinion also provides an overview of the assessments for other countries.

## FULL REPORT

### 1. DATA

- The available information was suitable to finalise the GBR risk assessment. However, this report still depends to a certain extent on assumptions.

#### Sources of data

Country dossier consisting of:

- Basic questionnaire for the assessment of the Geographical BSE-risk of El Salvador transmitted by the Mission of El Salvador to the European Community on November 3, 2000.
- Supplementary information related to the "Draft Report on the Assessment of the GBR in El Salvador" transmitted by the Mission of El Salvador to the European Commission on April 27, 2001.

Other sources:

- EUROSTAT data on "live bovine animals" and on "flour, meal and pellets of meat or offal, unfit for human consumption; greaves", covering the period 1980 to 2000.
- UK-export data on "live bovine animals" and on "Mammalian Flours, Meals and Pellets", 1980-1996. As it was illegal to export mammalian meat meal, bone meal and MBM from UK since 27/03/1996, exports indicated after that date may have included non-mammalian MBM.

### 2. EXTERNAL CHALLENGES

#### 2.1 **Import of cattle from BSE affected countries**

According to the country dossier, El Salvador did not import any live cattle from the UK or any other BSE-affected country. This statement is supported by UK EUROSTAT export data. In the period 1990-2000, El Salvador has imported cattle mainly from Nicaragua (124,755 head); much smaller numbers of cattle were imported from Honduras, Mexico, Costa Rica and other American Countries.

No ban was adopted on live cattle import from any country.

#### 2.2 **Import of MBM or MBM-containing feedstuffs from BSE affected countries**

According to the country dossier as well as UK and EUROSTAT export data, El Salvador did not import any MBM from the UK or other BSE affected countries over the reference period 1980-2000.

For the period 1997-2000, El Salvador provided imported MBM the USA (years 1997-2000), Costa Rica (years 1997-1998) and Guatemala, Nicaragua and Honduras (year 1997) at the following quantities: Year 1997: 329.5 tonnes; Year 1998: 81 tonnes; Year 1999: 40 tonnes and Year 2000: 58 tonnes. No data are available for the previous years (source: country dossier).

No ban was adopted on MBM import from any country.

### **2.3 Overall assessment of the 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.

| <b>External Challenge experienced by El Salvador</b> |              |   |                    |                  |
|--|--------------|---|--------------------|------------------|
| <i>External challenge</i>                            |              | <i>Reason for this external challenge</i> |                    |                  |
| <b>Period</b>  | <b>Level</b> | <b>Cattle imports</b>                     | <b>MBM imports</b> | <b>Comment</b>   |
| <b>1980-2000</b>                                     | Negligible   | Negligible                                | Negligible         | All data sources |

**Table 1: External Challenge resulting from live cattle and/or MBM imports from the UK and other BSE-affected countries. The Challenge level is determined according to the SSC-opinion on the GBR of July 2000.**

The available data indicate that the external challenge resulting from the import of live cattle and/or MBM has been negligible over all the reference period.

## **3. STABILITY**

### **3.1 Overall appreciation of the ability to avoid recycling of BSE infectivity, should it enter processing**

#### **Feeding:**

Feeding of MBM to ruminants is legally possible.

The composition of cattle feed consists of improved and natural grasses, corn, sorghum, soybean, residues of rice polishing, wheat bran, sugar cane residues, harvest stubbles, urea and MBM. No detailed information has been provided on the different feed types consumed.

Therefore, it is assumed that feeding cattle with MBM, BM, MM or greaves would have been and would be still possible.

**Rendering:**

According to the country dossier, a rendering industry does not exist in El Salvador. Insufficient "volume to produce" is given as a reason, but without further explanations.

However, this argumentation is not fully convincing in view of the size of the cattle population of the country (1.4 million cattle, of which more than 500,000 are cows older than 3 years). Given the very limited information, it therefore is assumed that some sub-industrial scale rendering of bovine material into feed, e.g. as by-products from some fat extraction, occurs and did occur in the past.

**SRM and fallen stock**

There is no SRM-ban in place in El Salvador. SRM are consumed by humans or carnivores but the extent to which this happens cannot be quantified.

Cattle that die in transport are under jurisdiction of the local authorities (municipal) and according to the health code, they should be destroyed and not approved for animal or human consumption.

It is assumed that both, SRM and fallen stock could be rendered at a sub-industrial scale into some kind of feed.

**Cross-contamination:**

Given the fact that feeding cattle with animal protein is legally possible and apparently is done, it is obvious that cross-contamination is not an issue.

**Conclusion on the ability to avoid recycling**

In line with the above-outlined reasonable worst case assumption it is assumed that the BSE agent, should it have entered the territory of El Salvador would have been recycled and potentially amplified.

**3.2 Overall appreciation of the ability to identify BSE-cases and to eliminate animals at risk of being infected before they are processed****Cattle population structure**

According to the country dossier, in the year 2000 the cattle population in El Salvador consisted of about 1.4 million head, of which about 72 % female; the number of dairy cows older than 3 year was close to 500,000.

This population has been rather stable with a yearly increase of 3-4 % since 1995.

No data were provided on average milk yield or co-farming.

### Surveillance and culling

Notification of BSE has been compulsory since 1998 but no information was provided on which legal basis this measure was taken.

No description is given of the criteria for a BSE-suspect.

Awareness / training measures are apparently in place, but it is not described in details given, the nature of these measures and date of implementation. On the basis of the available information the efficiency of these measures cannot be judged.

No compensation scheme covers the market value of confirmed cases and culled suspects.

Since 1998 when BSE became notifiable, the existing passive surveillance identified 10 CNS- suspects (5 in 1999, 5 in 2000). These have been tested for BSE in the reference laboratory of the San Carlos University of Guatemala by histopathology as there is no trained laboratory personnel in El Salvador to diagnose BSE. All 10 CNS-suspects have been negative for BSE.

This number of CNS-suspects annually tested is well below the current OIE-requirements of about 50, assuming an adult cattle population of about 500,000.

There are no active surveillance measures.

### **3.3 Overall assessment of the stability**

For the overall assessment of the stability the impact of the three main stability factors (i.e. feeding, rendering and SRM removal) and of the additional stability factors, mainly cross-contamination and surveillance plus culling, has to be estimated. Again the guidance provided by the SSC in its opinion on the GBR of July 2000 are applied.

**Feeding:** Feeding MBM to cattle is still legally possible. Since there is no justification provided why MBM feeding to ruminants should not take place, it is assumed that feeding was and is "not OK".

**Rendering:** There is apparently no rendering industry in El Salvador. However, it was not sufficiently explained what happens to slaughterhouse offal, fallen stock and condemned materials and, in view of the available raw material, sub-industrial "rendering" is assumed to exist. Rendering is therefore assumed being "not OK" throughout the reference period.

**SRM-removal:** There is no SRM ban. Therefore SRM removal was assumed being "not OK" throughout the reference period. Assuming that some "sub-industrial" rendering takes place, SRM (and fallen stock) could therefore have entered the feed cycle.

**Other stability factors:** Given the fact that MBM could be legally fed to cattle, there are no measures taken to avoid cross-contamination of ruminants feed with MBM. Also surveillance is not able to discover BSE. The "other factors" therefore reduce the stability of the system.

| Stability of the BSE/cattle system in <b>EL SALVADOR</b> over time |                    |         |           |        |        |
|--|--------------------|---------|-----------|--------|--------|
| Stability  |                    | Reasons |           |        |        |
| Period   | Level              | Feeding | Rendering | SRM    | Other* |
| 1980 - 2000  | Extremely unstable | Not OK  | Not OK    | Not OK |        |

**Table 2: Stability resulting from the interaction of the three main stability factors and the other stability factors. The Stability level is determined according to the SSC-opinion on the GBR of July 2000.**

On the basis of the available information the stability cannot be evaluated in depth. In line with the principal of “reasonable worst case assumptions” the BSE/cattle system of El Salvador is therefore assumed being extremely unstable throughout the reference period.

#### **4. CONCLUSION ON THE RESULTING RISKS**

##### **4.1 Interaction of stability and challenges**

The conclusion on the stability of the BSE/cattle system of El Salvador over time and on the external challenges the system had to cope with are summarised in the table below. From the interaction of the two parameters "stability" and "external challenge" a conclusion is drawn on the level of "internal challenge" that emerged and that had to be met by the system, in addition to external challenges that occurred.

| INTERACTION OF STABILITY AND EXTERNAL CHALLENGE IN <b>EL SALVADOR</b> |                    |                    |                    |
|---|--------------------|--------------------|--------------------|
| Stability   |                    | External Challenge | Internal challenge |
| Period  | Level              | Level              |                    |
| 1980-2000   | Extremely unstable | Negligible         | Highly unlikely    |

**Table 3: Internal challenge resulting from the interaction of the external challenge and stability. The internal challenge level is determined according to guidance given in the SSC-opinion on the GBR of July 2000.**

The extremely unstable BSE/cattle system of El Salvador was exposed to only negligible external challenges, if at all. It is therefore highly unlikely that an internal challenge ever emerged or is currently present.

The fact that the external challenges were negligible implies that the risk that the BSE-agent was imported into the country can be neglected. However, in view of the extremely unstable system any BSE-infectivity that would have entered cattle feed in El Salvador would have started the vicious cycle that would have lead to recycling and fast amplification of the agent.

#### **4.2 Risk that BSE infectivity entered processing**

Given the fact that the BSE-agent was most likely not imported into the country, a risk that BSE infectivity entered processing never arose.

#### **4.3 Risk that BSE infectivity was recycled and propagated**

As BSE-infectivity most likely never entered processing, the risk that it was recycled and amplified is negligible.

However, given the fact that the system was and is extremely unstable, any BSE infectivity that enters processing would most probably be recycled via cattle feed and quickly amplified.

### **5. CONCLUSION ON THE GEOGRAPHICAL BSE-RISK**

#### **5.1 The current GBR as function of the past stability and challenge**

The current geographical BSE-risk (GBR) level is *I*, *i.e. it is highly unlikely* that domestic cattle are (clinically or pre-clinically) infected with the BSE-agent.

*In view of the extremely unstable system, this assessment is fully depending on the negligible external challenge.*

#### **5.2 The expected development of the GBR as a function of the past and present stability and challenge**

- As long as no external challenge occurs, the GBR remains unchanged.
- In view of the extremely unstable system, however, any non-negligible external challenge would lead to an increase of the GBR.

#### **5.3 Recommendations for influencing the future GBR**

In order to ensure that the GBR would not increase, it is recommended to take measures to increase the stability of the system. By ensuring (imported) MBM not being fed to cattle the stability of the system would already improve.

Improved surveillance would enhance the certainty that BSE is absent from the territory of El Salvador.