

REPORT
ON THE ASSESSMENT
OF THE
GEOGRAPHICAL BSE RISK OF
NICARAGUA

FULL REPORT

1. DATA

- The available information was sufficient to carry out a qualitative assessment of the GBR.

Sources of data :

- Completed questionnaire for the assessment of the Geographical BSE-risk of Nicaragua transmitted by the Embassy of Nicaragua on 26/10/2000.
- Certification of BSE freedom issued by the Ministerio Agropecuario y Forestal dated 17/10/2000.
- Clarifications and comments on the draft report for the assessment of the Geographical BSE-risk for Nicaragua received from the Government and Veterinary Service of Nicaragua on December 12, 2000 and February 5, 2001.

Other sources :

- EUROSTAT data on exports of "live bovine animals" and of "flour, meal and pellets of meat or offal, unfit for human consumption; greaves", from EU Member States, covering the period 1980 to 1999.
- 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 Nicaragua did not import any cattle from the UK or any other BSE affected countries from 1980 until present. The UK Veterinary Service confirmed this statement. Cattle exports shown in the UK export data for 1982 and 1992 are explained to be a mistake in the database. Export of 7 heads of cattle in 1982 as indicated in the EUROSTAT data were as well not confirmed by the UK.

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

- According the country dossier, the UK export statistics, and the Eurostat export data, Nicaragua has not imported any MBM or feedstuff containing MBM from the UK or any other BSE affected country. Nicaragua states that because of the Foot and Mouth Disease Free status of the country it would not import MBM. In addition, MBM was not imported from the UK for economic reasons.

It could not be confirmed that there is an official import ban for MBM into Nicaragua.

2.3 Overall assessment of the external challenge

External Challenge experienced by <u>NICARAGUA</u>				
<i>External challenge</i>		<i>Reason for this external challenge</i>		
Period	Level	Cattle imports	MBM imports	Comment
1980 until present	negligible	negligible	negligible	

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.

It appears, according to the available statistical data and additional information given by Nicaragua, that the external challenges from imports of live cattle and MBM from BSE affected countries have been negligible from 1980 until present.

3. STABILITY

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

Feeding:

According the country dossier there is no official feed ban.

Nicaragua states, however, that MBM, BM, MM or greaves neither are currently nor were since 1980 fed to bovines. Reasons for this are not provided. MBM, BM, MM or greaves produced within the country are, however, fed to pigs and poultry. Without additional information it has to be assumed that feeding cattle with MBM, BM, MM or greaves could have happened in the past due to the absence of an official feed ban.

Rendering:

According to the country dossier there are two rendering plants processing bovine raw materials (only bones) for non ruminant (pigs and poultry) feed in which both batch and continuous rendering takes place. The total annual production is 4000 t.

The process conditions are described as being 150-160°C for 20 minutes at 90 PSI (= 6.205 bar). This process can be considered to be at least as efficient in reducing incoming BSE infectivity as the 133°C/20^{min}/3^{bar} standard.

Further detailed information, such as controls of the correct application of the mentioned process conditions, are, however, not provided by the country dossier. Therefore it has to be assumed that rendering is at least not fully appropriate.

SRM and fallen stock

There is no official SRM-ban.

The country dossier, however, indicates that brains and spinal cord as well as fallen bovine stock are not rendered for feed production. Brains and spinal cord, it is explained, are consumed by the human population. It is not clear what happens to fallen stock, in particular to dead on arrival animals and ante-mortem condemned animals, or to post-mortem condemned carcasses or parts of carcasses, including SRM.

No information is provided on any controls to assure that SRM and fallen bovines do not enter the feed chain via the rendering process. It therefore is assumed that SRM and fallen stock could be rendered for feed.

Cross-contamination:

Given the fact that no feed-ban exists in Nicaragua, cross-contamination (accidental inclusion of RMBM in feed that should be MBM-free) is no issue. It is therefore assumed, as a reasonable worst case scenario, that cattle feed could contain MBM, also if this was not intended.

Conclusion on the ability to avoid recycling

In light of the above it has to be assumed that the BSE agent, should it have entered the Nicaragua territory, could have been recycled and 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, the total cattle population of Nicaragua is 2 million heads with an average age of 3 ½ years at slaughter. The current male cattle population over 24 months contains 200,000 heads for meat production, 20,000 heads for breeding purposes and 10,000 work animals.

10,000 heads of female cattle over 24 months are going annually into meat production. The dairy herd is reported to consist of 500,000 heads and 500,000 additional heads are used for breeding.

Surveillance and culling

BSE is not a notifiable disease in Nicaragua.

Therefore compensation would not be provided for confirmed cases of BSE or for culled suspects.

According to the country dossier there are no methods available to examine BSE suspects in the country; consequently, no criteria to confirm BSE suspects have been established in the past and presently. Nicaragua has however sent in 2000 an unknown number of brain samples to the OIRSA reference laboratory in Guatemala City which proved to be negative for BSE. Nicaragua, according to the

country dossier, will continue to send brain samples to the OIRSA reference laboratory in 2001. No information is provided if the samples already examined were originating from CNS-suspects or were randomly sampled from animals deriving from at risk cattle populations (animals over 30 months).

Awareness / training measures are apparently not in place.

It is unknown if during the last 10 years CNS- suspects were analysed for other reasons than BSE.

In view of this information it is assumed that the BSE-surveillance is not able to detect BSE-cases.

3.3 Overall assessment of the stability

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

Stability of the BSE/cattle system in <u>NICARAGUA</u> over time					
Stability		Reasons			
Period	Level	Feeding	Rendering	SRM	Other*
1980 until present	unstable	not OK	reasonable OK	reasonable OK	

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

* Other refers to the impact on the stability of other factors than the three main stability factors. Neither measures to reduce cross-contamination nor to identify clinical BSE-cases to eliminate animals at risk of being infected are in place. This reduces stability ().

On the basis of the available information it has to be concluded that the country's BSE/cattle system was and is very unstable:

- Feeding of MBM to cattle was and is still not officially banned. Therefore feeding is considered to be "not OK" throughout the reference period (1980-1999).
- Rendering is apparently done under conditions that are able to reduce BSE-infectivity and the raw material normally does not include SRM and fallen stock. However no control measures are reported. Therefore rendering is only considered to be "reasonable OK".

- There is no SRM ban but parts of SRM are used for human consumption. Therefore SRM removal can be considered "reasonable OK".
- The possibility of cross-contamination exists and it is unlikely that the system would be able to detect small numbers of clinical BSE-cases. This further reduces stability.

4. Conclusion on the resulting risks

4.1 Interaction of stability and challenges

The conclusion on the stability of the **Nicaragua** BSE/cattle system and on the external challenges the system had to cope with over time 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 the external challenge that occurred.

INTERACTION OF STABILITY AND EXTERNAL CHALLENGE IN <u>NICARAGUA</u>			
Stability		External Challenge	Internal challenge
Period	Level	Level	
1980 until present	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.

Since no external challenge can be identified the system is highly unlikely to have encountered an internal challenge.

4.2 Risk that BSE infectivity entered processing

In view of the negligible external challenge it is highly unlikely that BSE entered processing.

4.3 Risk that BSE infectivity was recycled and propagated

Given the fact that the system was and is unstable, it has to be assumed that if BSE infectivity would have entered processing it would have been most probably recycled and amplified. However, due to the absence of an external challenge, this risk is negligible.

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.

Note: This favourable assessment is mainly 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 in the future, the GBR remains unchanged.

5.3 Recommendations for influencing the future GBR

- Improve the stability of the system in particular by ensuring that cattle do not receive any MBM (official MBM feeding ban) as well as introducing SRM ban and rendering process control measures.
- Improve the surveillance by introducing a mandatory BSE notification and introduce active and passive surveillance methods as well as by initiating training programs for laboratory and veterinary service personnel.