

INTERNATIONAL ANIMAL HEALTH DIVISION



International Animal Disease Monitoring Team

Qualitative Risk Assessments

www.defra.gov.uk/animalh/diseases/monitoring/index.htm



Ref: VITT1200/FMD-BRAZIL

Version No.:	1
Date:	11 October 2005

FOOT AND MOUTH DISEASE IN BRAZIL (EU EXPORTING AREA)

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Suggested reference for this publication:

Defra, (2005). Foot and mouth disease in Brazil – EU Exporting Area. (Authors: Sabirovic, M., Hall, S., Grimley, P., Landeg, F.). International Animal Health Division, 1A Page Street, London, SW1P 4PQ, United Kingdom. Version 1, Released 11/10/2005, pp. 9.

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1. Summary

The Brazilian authorities reported an outbreak of FMD in cattle and pigs at the beginning of October 2005. This outbreak occurred in the EU approved zone of Brazil where vaccination is practiced. Only importations of deboned beef, canned and processed pet food, and dog chews are permitted to the EU from this zone of Brazil.

The EU is taking safeguard measures that will suspend the importation of deboned beef from the affected area (Mato Grosso do Sul), including the area at risk (Parana). Deboned beef that has been obtained from cattle from these two areas before 30 September 2005 will be allowed entry into the EU. Importations of deboned beef from other unaffected areas within an approved export zone will continue undisrupted.

The EU permits importations of canned and processed pet food, and dog chews from the approved exporting area of Brazil. Processing is considered sufficient to destroy the virus, therefore, importations of these commodities continue undisrupted.

The likelihood from potential illegal imports has not increased, especially when considered in the context of the on-going potential for the introduction of the disease from countries where FMD is present (endemic).

This outbreak of FMD in Brazil's approved export zone is of concern as it could be a warning sign that movement controls may not be adequately implemented. Should this be the case, outbreaks may occur in non-affected areas of the EU-approved export zone from where importations of deboned beef continue undisrupted.

The IAHD will continue to monitor developments and will revise this assessment if circumstances change in the future.

2. Introduction

This qualitative risk assessment considers the likelihood of the introduction of foot and mouth disease (FMD) to the UK via various pathways following an outbreak in the EU exporting area of Brazil.

The map in this report was prepared from official reports. It does not necessarily reflect the true situation. Therefore it should be regarded as indicative but not as a definitive reflection of the presence and distribution of diseases in the affected country. The map was produced using ESRI Data and maps CD (2002).

3. Hazard identification

3.1. FMD in Brazil - Official disease report

The Brazilian authorities notified the clinical detection and laboratory detection of the FMD virus type O on a cattle farm in Mato Grosso do Sul (Eldorado district). The disease was also detected in a small pig herd (eight pigs) located at the same premises. The authorities estimated that the disease was introduced into the affected

farm on 26 September. The outbreak was confirmed on 8 October 2005 (Caetano Junior, J., 2005)



Mato Grosso do Sul is one of the EU approved exporting provinces in the Brazil's FMD free zone with vaccination (see map) This province borders Paraguay and Bolivia and also other approved areas within the EU-approved export zone of Brazil.

3.2. FMD situation in neighboring countries

FMD appears to be endemic in Bolivia, Ecuador and Venezuela. The disease occurs sporadically in Argentina, Paraguay, Uruguay, Peru, Colombia

IAHD Foot and mouth disease outbreak in Brazil EU export area

Map prepared by IAHD - IADM 10 October 2005

ArcGIS 8 Development Team March 2000
Source: ESRI Data & Maps CD
Created in ArcGIS 8 using ArcMap

and Brazil. FMD serotypes O, A, and C are known to occur in the affected regions. The general FMD situation in South America had significantly improved by the mid 1990s. Since 2000, however, Argentina, Brazil, Paraguay and Uruguay have had new outbreaks resulting in major trading setbacks.

The establishment of FMD-free areas may have resulted in significant changes in livestock movements in the region that could favour sporadic occurrence of outbreaks. That is, the producers in the FMD-free areas are economically advantaged compared to producers in the affected areas who can sell produce to the domestic market only. The free areas have also generated price differentials, particularly for fattening cattle and replacement stock. This, in turn, has created incentives to move livestock to these areas from economically less viable areas (Corea Melo and Lopez, 2002). Therefore, maintaining the recognised FMD free status (without or with vaccination) will remain a constant challenge for some countries while the disease remains present in neighbouring countries or areas.

4. Risk assessment

4.1. Terms and definitions

For the purpose of the release assessment section (Section 4.2) of this qualitative risk assessment, the following terminology will apply (OIE, 2004):

Term	Definition
Likelihood	Probability; the state or fact of being likely
Likely	Probable; such as well might happen or be true; to be reasonably expected
High	Extending above the normal or average level
Highly	In a higher degree
Low	Less than average; coming below the normal level
Negligible	Not worth considering; insignificant
Remote	Slight, faint
Would	To express probability; past of Will: expressing a wish, ability, capacity, probability or expectation

This qualitative risk analysis was undertaken to assist the process of identifying whether safeguard measures may be required to manage the likelihood of the introduction of foot and mouth disease as a result of the outbreak of disease in the EU approved exporting zone of Brazil. Any such measures must maintain appropriate level of protection (ALOP) without unduly restricting trade.

In general, the UK ALOP is that legal importation of live animals or their products from EU Member States or Third Countries must present a negligible likelihood that the diseases of concern will be introduced.

Only importations of deboned beef and processed pet food and dog chews are permitted from certain regions of southern Brazil that are within the officially recognized FMD free zone where vaccination is practiced. No other susceptible live animals (e.g. sheep or pigs) or their products are permitted.

Therefore, imports of deboned beef for human consumption and processed pet food are considered as hazards for further consideration.

4.2. Release assessment – Legal trade (Current situation)

4.2.1. Terms and definitions

For the purpose of the release assessment section (Section 4.1) of this qualitative risk analysis, the following definitions will apply (OIE, 2005):

Term	Definition
FMD	Foot and mouth disease is an acute infectious disease, which causes fever, followed by the development of vesicles (blisters) - chiefly in the mouth and on the feet. The disease is caused by a virus of which there are seven different serotypes (O, A., C, SAT1, SAT2, SAT3, and Asia 1), each producing the same symptoms, and distinguishable only in the laboratory (Defra, 2005a).
Incubation period for FMD	14 days (OIE, 2005)

4.2.2. Permitted imports

This release assessment considers the trade in risk commodities between Brazil and the UK to date including the 4 weeks before the end of September 2005, at which point FMD infection was suspected. This estimated risk period is just over twice the time of the maximum incubation period for FMD, as specified by the OIE.

4.2.2.1. Deboned beef

Conclusion: *There would be a low risk that importations of deboned beef for human consumption could result in the introduction of the disease to the UK via legal imports after the outbreak, thus, the EU has now banned the importations of this commodity. This estimate was negligible before the outbreak was notified at the end of September.*

Key facts:

- a) *Imports of deboned beef is subject to official certification that beef was obtained from cattle that come from an approved EU region of Brazil where FMD vaccination is practised;*
- b) *These cattle must come from holdings that are free from the disease and transported to directly slaughter;*
- c) *Cattle are subject to ante-mortem examination 24 hours before slaughter;*
- d) *Carcasses are subjected to maturation for at least 24 hours before deboning. This time period, combined with low pH that develops in meat after slaughter and deboning are considered sufficient to minimise the likelihood of the presence of viable virus in deboned meat, if present;*
- e) *Taking into account the incubation period for FMD, the EU will allow import of deboned meat that has been obtained from cattle slaughtered before 30 September 2005;*
- f) *All consignments of deboned beef from Brazil are subject to veterinary checks at the point of entry into the EU.*

Supporting evidence

According to EU rules (European Commission, 2005a) only imports of deboned beef for human consumption are permitted from the exporting zones (FMD free zones with vaccination) of Brazil to the EU (and the UK).

Deboned bovine meat for human consumption must be obtained from cattle that come from an approved territory where vaccination is carried out and holdings that are free of the disease. Cattle must be sent direct to slaughter and no mixing with other cattle that do not comply with EU rules is allowed during the transport. Cleaning and disinfection of transport vehicles must be carried out before slaughter. Cattle must be slaughtered in EU approved establishments that are not subjected to any restrictions. Cattle must be subjected to ante-mortem inspection for FMD is carried out 24 hours before slaughter. Their carcasses must be matured at $>+2^{\circ}\text{C}/24$ hours and have $\text{pH} < 6.0$ after maturation and before boning.

The EC has taken action to prevent exports of meat from animals from the area affected by the current outbreak (Mato Grosso do Sul) and the additional area considered to be at risk (Parana) (European Commission, 2005b).

According to available import statistics the UK imported approximately 22,000 tones of boneless beef for the period between January to July 2005. This is approximately 65% of the annual importations of deboned beef from Brazil to the UK.

4.2.2.2. Finished pet food

Conclusion: There would be a negligible risk that importations of processed pet food and dog chews could result in the introduction of the disease to the UK via legal imports before and after the outbreak. Processing is considered sufficient to destroy the virus, therefore, importations of this commodity continues to be allowed.

Key facts:

- a) *Importations of finished pet food and dog chews are subject to official certification;*
- b) *These importations are permitted from an approved EU region of Brazil where FMD vaccination is practised;*
- b) *Processing of these commodities require heat-treatment which is considered sufficient to destroy the virus;*
- c) *Importations of these commodities are subject to veterinary checks at the point of entry into the EU.*

Supporting evidence

EU rules (European Commission, 2005c) permit importations of canned and processed pet food and dog chews from an approved region of Brazil where FMD vaccination is carried out. Pet food must be come a pet food plant that has been approved by the competent authority of Brazil.

Canned pet food must be subjected to heat treatment (sterilisation) in hermitically sealed containers. Processed pet food must be subjected to heat treatment of at least 90°C throughout its substance. Dog chews prepared from hides and skins must

be to a heat treatment sufficient to destroy pathogenic organisms (including *Salmonellae*).

4.2.3. Other pathways

The likelihood of the introduction of FMD to the UK by illegal trade from FMD infected countries is present, but difficult to estimate. The hazard from personal imports (illegal trade) from Central and South America appears to be relatively low compared to other countries where FMD is present (Defra, 2005b)

5. Conclusion

Brazilian authorities reported an outbreak of FMD in cattle and pigs at the beginning of October 2005. This outbreak occurred in the EU approved zone of Brazil where vaccination is practiced. Only importations of deboned beef, canned and processed pet food and dog chews are permitted to the EU from this zone of Brazil.

The EU is taking safeguard measures that will suspend importation of deboned beef from the affected area (Mato Grosso do Sul), including the area at risk (Parana). Deboned beef that has been obtained from cattle from these two areas before 30 September 2005 will be allowed entry to the EU. Importations of deboned beef from other unaffected areas within an approved export zone will continue undisrupted.

EU permits importations of canned and processed pet food, and dog chews the approved exporting area of Brazil. Processing is considered sufficient to destroy the virus, therefore, importations of these commodities continue undisrupted.

The likelihood from potential illegal imports has not increased, especially when considered in the context of on-going likelihood for the introduction of the disease from countries where FMD is present (endemic).

This outbreak of FMD in Brazil's approved export zone would be of concern as it could be a warning sign that movement controls may not adequately implemented. Should this could be the case, outbreaks may occur in non-affected areas of the approved export zone from where importations of deboned beef continue undisrupted.

The IAHD will continue to monitor the development and will subject this assessment to revision if circumstances change in the future.

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