FMD in Great Britain (Surrey)

Preliminary Report - An overview

Fred Landeg
Deputy Chief Veterinary Officer

8 August 2007
This presentation outlines:

• Disease control measures

• Preliminary epidemiological findings
NEWS RELEASE

Foot and Mouth Disease confirmed in cattle, in Surrey

Following an investigation of suspected vesicular disease by Animal Health on a holding near Guildford in Surrey, laboratory results have this evening indicated that the Foot and Mouth Disease (FMD) virus is present in samples from cattle on the premises.

On the basis of the initial laboratory results Debby Reynolds, UK Chief Veterinary Officer has confirmed Foot and Mouth Disease. In accordance with the legislation and contingency planning arrangements all the cattle on the premises will be culled. A Protection Zone of three kilometres radius and a Surveillance Zone of 10 kilometres has been placed around the premises, and a GB wide national movement ban of all ruminants and pigs has been imposed.

Nationally no animal movements are allowed except under licence, controls are in place on movement of animal carcasses, animal gatherings, shearing and dipping are restricted, and all farms must increase levels of biosecurity. In both the Protection and Surveillance Zones, there will be requirements for increased levels of biosecurity on farms, movement controls, controls on transportation of dung/manure and treatment of animal products to ensure destruction of the FMD virus.

The farm itself has been under restrictions since late on Thursday evening when symptoms were reported to the local Animal Health office. A 1km temporary restriction zone was placed around the premises earlier today whilst investigations and testing were completed, in line with domestic and EU legislation.

The European Commission has been informed.
Disease control measures

Suspicion – 2 Aug 07

Confirmation 3 Aug 07

PZ/SZ established

PZ and SZ

• Low density livestock area

• Mainly small and hobby farms
Affected holding (PZ1)

- Beef finishing cattle
- Four separate sites under the same ownership – cattle present at three sites only
  - Site 1 (38 cattle at grass): Clinical signs – FMD confirmed by IAH, Pirbright, on 3 Aug 07
  - Site 2 (4 housed cattle): No clinical signs
  - Site 3 (22 cattle at grass): No clinical signs
- All 64 animals culled on 4 Aug 07 and sampled
- IAH, Pirbright report – 5 August 07
  - Site 2: no evidence of infection
  - Site 3: Only 1 animal tested RT-PCR positive
Disease control measures

- Affected holding (Site 3 – 5 Aug 07)
  - 1 culled animal RT-PCR (+)ve
- PZ and SZ adjusted (5 Aug 07)
Protection Zones

- Affected holding - Site 1 (PZ1)
  - One ‘dangerous contact’ identified by veterinary risk assessment
  - All animals (8 sheep, 2 goats, 9 pigs) culled on 4\textsuperscript{th} Aug 07

- Affected holding – Site 3 (PZ2)
  - One ‘dangerous contact’ identified by veterinary risk assessment
  - All animals (18 cattle) culled on 6\textsuperscript{th} Aug 07

- No markets or dealers identified

- Surveillance
  - Visits and clinical inspection
  - All sheep and goats – statistical blood sampling
Protection Zones – surveillance visits

FMD Summary of Premises, Visits and Sampling
Reporting data on PZ visits
Time: 07.30am; Tuesday 7th August

***PROVISIONAL FIGURES***

<table>
<thead>
<tr>
<th>Zone</th>
<th>Total number of premises with FMD susceptible livestock</th>
<th>Total number of premises with sheep or goats</th>
<th>Individual premises visited</th>
<th>Premises still to be investigated</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>To be sampled</td>
</tr>
<tr>
<td>PZ1</td>
<td>81*</td>
<td>51*</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>PZ2</td>
<td>22*</td>
<td>7*</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Totals</td>
<td>103</td>
<td>58</td>
<td>18</td>
<td>46</td>
</tr>
</tbody>
</table>

* DCS premises with Vetnet herd types relating to sheep, goats, deer + additional by LDCC patrols
Surveillance Zone

- Surveillance
  - Visits and clinical inspection

- Tracing

- Two abattoirs (red meat) identified
Great Britain

• Report cases
  – Report cases outside PZ and SZ – all negated

• National Movement Ban
  – Movement of susceptible animals and their products
  – Exception – Licence subject to conditions
    • Emergency veterinary treatment on the same property
    • Milking cows crossing the public road on the same property
Potential source of the virus

- The field isolate is closely related to a vaccine/laboratory FMD virus type O1-BFS/1967 (British Field Strain)

- This type is used by the IAH, Pirbright in serology testing and testing of disinfectants

- This type is also used by the Merial Animal Health, which is co-located at the IAH, Pirbright, for manufacture of FMD vaccine
### Epidemiological investigation

#### Hypothesised timeline

<table>
<thead>
<tr>
<th>Days from date of 1st lesion</th>
<th>Age of oldest lesion (days)</th>
<th>Day of week</th>
<th>Date</th>
<th>Spread tracing window (SOURCE tracing)</th>
<th>Most likely period of infection (SOURCE tracing)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-12</td>
<td></td>
<td>Sat</td>
<td>14/07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-11</td>
<td></td>
<td>Sun</td>
<td>15/07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-10</td>
<td></td>
<td>Mon</td>
<td>16/07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-9</td>
<td></td>
<td>Tue</td>
<td>17/07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-8</td>
<td></td>
<td>Wed</td>
<td>18/07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-7</td>
<td></td>
<td>Thu</td>
<td>19/07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-6</td>
<td></td>
<td>Fri</td>
<td>20/07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-5</td>
<td></td>
<td>Sat</td>
<td>21/07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-4</td>
<td></td>
<td>Sun</td>
<td>22/07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-3</td>
<td></td>
<td>Mon</td>
<td>23/07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-2</td>
<td></td>
<td>Tue</td>
<td>24/07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-1</td>
<td></td>
<td>Wed</td>
<td>25/07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td></td>
<td>Thu</td>
<td>26/07</td>
<td>Date of first lesion (26 July)</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>Fri</td>
<td>27/07</td>
<td>First clinical signs OBSERVED (29 July)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>Sat</td>
<td>28/07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>Sun</td>
<td>29/07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>Mon</td>
<td>30/07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>Tue</td>
<td>31/07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>Wed</td>
<td>01/08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>Thu</td>
<td>02/08</td>
<td>Report date (21:00hrs 02 Aug)</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>Fri</td>
<td>03/08</td>
<td>IP confirmed (03 Aug)</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>Sat</td>
<td>04/08</td>
<td>Slaughter completed at Normandy site</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>Sun</td>
<td>05/08</td>
<td>Guinea Field now part of IP (05 Aug)</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>Mon</td>
<td>06/08</td>
<td>TODAY</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>Tue</td>
<td>07/08</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Commercial vaccine production commenced using O1 BFS1967 (week beginning 16 July)
- Drains from main sewer opened and flooded field (20 July)
EC TRACES Team advised on movements from the affected area between 5th July 2007 - 1st August 2007

• Susceptible live species
  – 4 consignments of bovine animals (31 animals)
    • 3 consignments moved to UK destinations
    • 1 consignment moved to Poland
  – 1 consignment (1 animal) live swine moved to France
  – 1 consignment of live sheep (378 animals) moved to Netherlands
  – 1 consignment of live goats (8 animals) moved to France

• Other
  – 1 consignment of semen, (Equus asinus) moved to Austria
  – 1 consignment of semen (Equus cabalus) moved to France
2\textsuperscript{nd} affected holding (PZ1)

- Beef finishing cattle within the existing PZ1
- Three separate sites under the same ownership (approx 102 cattle in total)
  - Site 1
    - Clinical signs - FMD confirmed by IAH, Pirbright on 7 Aug 07 by RT-PCR
    - Animal cull and sampling started on 6 Aug 07
  - Site 2
    - No clinical signs
  - Site 3
    - No clinical signs
- No link identified with the affected holding in PZ1 so far and investigation continues
- Serology testing underway
Conclusions

• FMD was confirmed in three herds which included beef finishing cattle on two affected holding. Disease control measures in accordance with Directive 2003/85 are in place in Great Britain.

• The sequencing of the VP1 gene of the first field isolate indicates the closes similarity to a vaccine/laboratory FMD virus type O1 BFS/1967.

• Clinical and serological surveillance in sheep and goats within the existing PZ and SZ and identification of trace-forward movements are being carried out to determine the possible extent of this event.

• There is no conclusive evidence of potential further spread from the two affected holdings to other holdings, so far.

• A ban on movements of live animals and their products within and from Great Britain remains in place and will be reviewed accordingly.

• This is an evolving situation and is subject to an on-going review