Foot and Mouth Disease in the UK (Surrey)

Fred Landeg
Deputy Chief Veterinary Officer

SCoFCAH 2 October 2007
Agenda

• Summary of initial cluster (2 cases)
• Second cluster (6 cases)
• Epidemiology
• Reinforced measures
• Staged, risk-based movement controls
• Conclusions
• Information as at 12:00 1 Oct 2007
Foot and Mouth Disease

On 12 September Foot and Mouth Disease was confirmed at a farm in Surrey. A single Protection Zone has been put in place around the land of this farm, with a Surveillance Zone of 10 kilometres radius beyond that. Cattle on the affected farm have been culled, together with animals on an adjacent farm, where disease was confirmed by laboratory testing on the 14th September.

Initial sequencing of the virus showed this to be type 01 BFS. Laboratory results on the 15th September confirmed that the strain found at the latest infected premises is the same as that in the August outbreak, namely 01 BFS 07.

On the afternoon of Saturday 16th, the decision was taken to slaughter on suspicion pigs on a farm in close proximity to the two infected Premises in Surrey.

A national movement ban - affecting cattle, sheep, pigs and other ruminants - was imposed throughout England, with parallel arrangements in Scotland and Wales. No movements are allowed, except under licence. As from midnight Saturday 16th September, further movements of animals susceptible to Foot and Mouth Disease direct to slaughter are permitted, under strict biosecurity conditions, from outside the Surveillance Zone in England.

All farms - particularly those in the Protection and Surveillance Zones - must implement increased biosecurity. Further details are in News Releases/Information Bulletins listed on our latest situation page.

If you suspect signs of any notifiable disease, you must immediately notify a Defra Divisional Veterinary Manager. If you need further information or advice not covered by these pages please contact the Defra Helpline on 08459 33 55 77 which is currently operating between 8am to 10pm Monday to Friday and 8am to 5pm Saturday and Sunday.

External links

- Surrey County Council
Restriction information last updated on 15 September, 2007

Animal Health Divisional Office Areas
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Initial cluster 2007

- 3 Aug: IP1 (3 locations)
- 6 Aug: IP2 (3 locations)
- 3 contact herds culled
- 24 Aug: PZs lifted
- 8 Sep: SZ lifted
- Origin: contamination from Pirbright site
Second cluster – initial cases

- IP3
  - Confirmed 12 Sep 2007
  - 281 cattle
  - 8 pigs
  - 8 locations
  - Clinical findings
  - 2 locations positive in lab
  - Culling completed 16 Sep

- IP4
  - Confirmed 15 Sep
  - 54 cattle (location B)
  - 743 pigs (location A)
  - Clinical findings in cattle only
  - Laboratory – cattle positive, pigs negative
  - Culling completed 16 Sep
Infected Premises 5

- Detected 16 September. No acute signs.
- 17 out of 22 cattle with 2-3 week old lesions. All seropositive, virus negative.
- 12 out of 16 sheep seropositive; 10 with old lesions. 2 pigs – no lesions; seronegative, virus negative.
- Confirmed 17 September. Single location.
**KEY**

**Routes of transmission**
- Agreed route of transmission
- Likely route of transmission
- Routes under investigation

*Dates show the estimated period of infectiousness of the premises.*

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*Requires virus survival of 11 to 26 days*
Infected Premises 6 & 7

- IP6
  - 21 September
  - 34 cattle
  - 2 locations
  - 2 out of 32 cattle at 1 location with 2-4 day lesions
  - 2 virus +ve
  - All seronegative

- IP7
  - 24 September
  - 16 cattle
  - Single location
  - 14 with acute signs
  - 1-4 day lesions
  - 15 virus +ve
  - 2 seropositive (with 4 day lesions)
Infection Timeline

**Spread window for IP1A**
16/07 to 24/07

**Source window for IP2**
17/07 to 29/07

**Spread window for IP4B**
20/08 to 01/09

**Source window for IP3B**
24/08 to 05/09

**Source window for IP3C**
26/08 to 07/09

**Spread window for IP4B**
30/08 to 15/09

**Source window for IP6B**
03/09 to 15/09

**Spread window for IP7**
08/09 to 16/09

**Note:** On IP3B, 28 out of 29 cattle found to be negative on serology. Therefore, expert opinion confirms that lesions ages must be five days or less.

**Range of uncertainty:**
- Source window
- Spread window
- Day zero date

**IP6B** = Pirbright site
Infected Premises 8

- 29 September
- 134 cattle, 16 sheep
- 4 locations (3 PZ, 1 SZ, just outside PZ)
- 54 cattle at infected site, 8 with lesions, estimated maximum 3-4 days.
- Other sites no signs, initial serology negative
## PZ Census

*Produced by NEEG from data available at 12:30, 29th September 2007*

Table. Number of premises with cattle, pigs and other stock to be clinically inspected, and number of inspections to be carried out

<table>
<thead>
<tr>
<th>Spp Category</th>
<th>Premises</th>
<th>Cattle</th>
<th>Pigs</th>
<th>Other</th>
<th>Premises Visited</th>
<th>Cattle Inspected</th>
<th>Pigs Inspected</th>
<th>Others Inspected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle-Pigs</td>
<td>28</td>
<td>468</td>
<td>964</td>
<td>0</td>
<td>28</td>
<td>468</td>
<td>964</td>
<td>0</td>
</tr>
<tr>
<td>Mixed</td>
<td>15</td>
<td>1228</td>
<td>124</td>
<td>0</td>
<td>15</td>
<td>1228</td>
<td>124</td>
<td>0</td>
</tr>
<tr>
<td>Sheep-Goats only</td>
<td>37</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>37</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
<td>1696</td>
<td>1088</td>
<td>0</td>
<td>80</td>
<td>1696</td>
<td>1088</td>
<td>0</td>
</tr>
</tbody>
</table>
## SZ Census

Produced by NEEG from data available at 12:30, 29th September 2007

<table>
<thead>
<tr>
<th>Type of premises</th>
<th>No. of premises</th>
</tr>
</thead>
<tbody>
<tr>
<td>Premises with susceptible stock (initially obtained from Census and CTS)</td>
<td>230</td>
</tr>
<tr>
<td>Premises with no stock, or stock numbers unknown</td>
<td>706</td>
</tr>
<tr>
<td>Total premises in the SZ (Excluding PZ)</td>
<td>936</td>
</tr>
</tbody>
</table>

Initial estimates of stock numbers for the 148 premises indicated in the table above. *(this excludes premises where stock numbers have yet to be determined)*

<table>
<thead>
<tr>
<th>Number of premises with stock (Premises are counted in each column for which they have stock)</th>
<th>Sheep</th>
<th>Goats</th>
<th>Cattle</th>
<th>Pigs</th>
<th>Deer</th>
</tr>
</thead>
<tbody>
<tr>
<td>92</td>
<td>66</td>
<td>105</td>
<td>41</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Number of stock</td>
<td>6095</td>
<td>577</td>
<td>4764</td>
<td>1729</td>
<td>0</td>
</tr>
</tbody>
</table>
Epidemiology Outside PZ & SZ

• 176 report cases 3 Aug – 1 Oct (12:00).
  – 2 under investigation.
• Tracings of animal movements from IPs, PZ, SZ identified and confirmed slaughtered or restricted and under investigation – initial results all negative.
• Enhanced veterinary examination at slaughter (AME, PME) and welfare licensing visits.
Distribution of Temporary Control Zones and Report Cases
Additional Culling

- 160 cattle + 1 goat on 4 holdings (5 locations) near IP8
- Likely to be exposed to infection
- Killed as dangerous contacts, no signs of disease post mortem
- Preliminary laboratory tests negative
Reinforced biosecurity

• Livestock keepers
• General public
Additional surveillance

- Sampling of cattle in PZ and SZ
- Sampling of cattle in previous SZ
- Repeated sampling of sheep
- Sampling where contamination may exist outside SZ
- Sampling of sheep outside SZ
Protection Zone (Sept 2007)
Refined Surveillance Activities

Visits and clinical inspection/ examination as necessary
- Sheep & goats
- Cattle herds
- Cattle, sheep, goats and pigs
- Pig herds
  - Every 2 days

Serology testing
- Sheep flocks
- Sheep and goat flocks
- Goat flocks
  - Initial + weekly blood sampling

Report cases
- Visit and clinical inspection & lab testing if required

Tracings outside Protection Zone (live animals)
- Visit and clinical inspection (cattle, sheep, goats, pigs)
- Serological testing
- Movement restrictions
  - Initial + repeat 3 weeks apart of date of movement

Other tracings (e.g. fomites, equipment)
- Action at the premise of destination subject to veterinary risk assessment

Note:
- Looking for current disease
- Clustering
- Tracings from 3 August
- Aqua and blue colour (with red colour inside) indicates modifications to previous activities in PZ (August 2007)
Truck movements from Pirbright
Map of Great Britain with Foot and Mouth Risk Areas.
1st October 2007.
Conclusions

• Outbreak still localised in an area with low livestock density and few movements.
• Additional culling, surveillance and biosecurity measures introduced in response to specific conditions in the area.
• Source of infection has been linked to initial Pirbright incident through virology and timeline.
• Unlikely that infection is present outside ‘risk area’ in South East England.
• Unlikely that contaminated meat, milk or other products are in circulation.