Bluetongue in Belgium: Epidemiological situation

SCOFCAH Brussels, 05-06 July 2011
Outline

• Outbreaks (2006 – 2011)
• Vaccination BTV8
• Entomological surveillance
• Surveillance 2009
• Surveillance 2010
• Surveillance 2011
# Outbreaks (2006 – 2011)

<table>
<thead>
<tr>
<th>Year</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>695</td>
<td>6870</td>
<td>48</td>
<td>0</td>
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<td>0</td>
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</tbody>
</table>

- No clinical case in Belgium since 30 months
- Any outbreaks in adjacent Memberdstates since the beginning of 2010
Vaccination BTV8

- Mandatory vaccination of cattle and sheep and voluntary vaccination of veal calves, goats and cervids in 2008-2009-2010.
- Vaccination by farm veterinarian.
- Registration of vaccinations in central database.
- Since January 2011, voluntary vaccination.
## Vaccination BTV8 - 2009

Mandatory vaccination of cattle and sheep

<table>
<thead>
<tr>
<th></th>
<th>Cattle</th>
<th>Sheep</th>
<th>Goat</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaccinated animals</td>
<td>2.333.980</td>
<td>222.295</td>
<td>3.675</td>
<td>2.559.950</td>
</tr>
<tr>
<td>Vaccine doses</td>
<td>2.934.277</td>
<td>222.295</td>
<td>3.675</td>
<td>3.160.247</td>
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<tr>
<td>% animals vaccinated</td>
<td>87</td>
<td>100</td>
<td>7</td>
<td>87</td>
</tr>
</tbody>
</table>
## Vaccination BTV8 - 2010

Mandatory vaccination of cattle and sheep

<table>
<thead>
<tr>
<th></th>
<th>Cattle</th>
<th>Sheep</th>
<th>Goat</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaccinated animals</td>
<td>2.272.279</td>
<td>201.191</td>
<td>993</td>
<td>2.474.463</td>
</tr>
<tr>
<td>Vaccine doses</td>
<td>2.860.855</td>
<td>201.191</td>
<td>993</td>
<td>3.063.039</td>
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<tr>
<td>Population</td>
<td>2.613.642</td>
<td>204.629</td>
<td>60.030</td>
<td>2.878.301</td>
</tr>
<tr>
<td>% animals vaccinated</td>
<td>87</td>
<td>98</td>
<td>2</td>
<td>86</td>
</tr>
</tbody>
</table>
Entomological surveillance 2010-2011

• 20 traps

• End of vector free season in 2010 : 3 May 2010

• Start of vector free season in 2010 : 1 December 2010

• End of vector free season in 2011 : 8 April 2011
Entomological surveillance 2010
Entomological surveillance 2011
Winterscreening 2008-2009

• 205 bovine farms sampled (blood+serum) in December 2008-February 2009.

• Stratified for age (10 animals 6-12 month, 10 animals 12-24 month).

• 7.270 Ab ELISA: 6.243 positive (86%).

• 5.805 RT-PCR: 155 (false?) positive (3 %).

• Animals with a positive RT-PCR result were not resampled and retested. Resampling for positive results began later.

• Conclusion: no or very low level of virus circulation in 2008
Suspicions in 2009

• 2,348 animals were tested by RT-PCR. **All were negative.**
Winterscreening 2009-2010

- 916 bovine farms sampled (blood+serum) in December 2009-February 2010.
- Stratified for age (10 animals 6-12 month, 10 animals 12-24 month).
- 11,695 Ab ELISA: 8,012 positive (69%).
- 8,574 RT-PCR: 115 false positive (1.34%).
- All animals with a positive RT-PCR result were resampled and retested. **All results were negative.**
Suspicion in 2010

- In the beginning of 2010, a monitoring programme of abortion was launched (screening of pathogens in every abortion in cattle and small ruminants). BTV8 was also checked.

- On 4,600 "suspicions" (>90% abortion cases), 13 foetus (0.28%) were slightly RT-PCR positive (CT values: 37.4 – 39.9). These Abortions occured in January and February 2010.

- No possibility to resample these cases.
Sentinel surveillance 2010

- To exclude viral circulation during the period of vector activity in 2010, additional surveillance was performed in October on sentinel herds.

- Testing of unvaccinated young (4-12 month) bovine animals in herds all over Belgium.

- 264 bovine farms sampled. 3,684 RT-PCR were performed.

- All results were negative.

- Conclusion: no virus circulation in 2010
Winterscreening 2010-2011

- Stratified for age (10 animals 6-12 month, 10 animals 12-24 month).
- 16,616 Ab ELISA: 10,823 positive (65%).
- 2,150 RT-PCR (non vaccinated young animals in sentinel herds): 22 false positive (1.02%).
- All animals with a positive RT-PCR result were resampled and retested. All results were negative.
Figure 1: Number of herds and samples by province tested for antibodies against BTV in 2011.
Figure 2. Spatial distribution of the sentinel herds sampled during the monitoring of Bluetongue in October-November 2010 (first round) and in January-February 2011 (second round)
Suspicions in 2011

• 4.016 animals were tested (97% abortions).

All were negative in RT-PCR.
Conclusions

• Conditions for lower risk zone (restricted zone with vaccination and without circulation of bluetongue virus) are fulfilled

• Free status achievable in the near future
Website

www.favv.be
www.afsca.be

Thank you for your attention