Data Base for Monitoring Classical Swine Fever in Wild Boar in the EU

Institute of Epidemiology, FLI, Wusterhausen, Germany
CRL CSF, TiHo Hannover, Germany
DG SANCO, EC, Brussels, Belgium
Background (1)

- CSF Outbreaks in Wild Boar 2002
  - North Rhine-Westfalia: 57
  - Rhineland-Palatinate: 366
  - Saarland: 1
  - Belgium: 1
  - Luxembourg: 65
  - France: 28

  (PCR in the infected zone; April 2002-March 2003)
Background (2)

• Proposal of the European working group on CSF in wild boar to establish a surveillance data base for the transparent evaluation of the epidemiological situation in the participating countries, in a spirit of co-operation (SANCO/10420/2002), in September 2002
• Final proposal of the Institute of Epidemiology (SANCO/10146/2003) in February 2003
• Decision of the European Commission concerning the financial support of the data base (2003/257/EC) in April 2003
CSF in Wild Boar Surveillance Data Base for Belgium, France, Germany, Luxembourg and The Netherlands
Central CSF Data Base
(data, queries, web server)

Departments
Districts

Laboratories

Ministries (BMELV)
Scientific Institutes

Competent „Land“ Authorities

Vaccination
Virus
Age
Serology
Virology
Current Realisation

• Security
  – Possibility to divide the user group in reading and reading/writing participants

• Language support
  – English

• Schedule
  – First version: November 2002
  – Test phase: December 2002 until December 2003
  – Full implementation: December 2003
Realisation (2)

- Data visualisation
  - HTML based visualisation of the data base
    - table view
    - summaries of the CSF data base stratified for any possible time period, e.g., by result, age class, restriction area, or region.

### Standardized Report

**Time period:** 01.01.2002 - 15.11.2003

**Area:** no area limitations

#### Field description

<table>
<thead>
<tr>
<th>Field description</th>
<th>Numbers</th>
<th>registered</th>
<th>negative</th>
<th>positive</th>
<th>p [%]</th>
<th>p_L [%]</th>
<th>p_U [%]</th>
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<tr>
<td>Official judgement</td>
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<td>49605</td>
<td>49465</td>
<td>138</td>
<td>0.2782</td>
<td>0.2338</td>
<td>0.2966</td>
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<td>Confirmation of the results</td>
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<td>393</td>
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<td>not confirmed</td>
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<td>46661</td>
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<td>42</td>
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<tr>
<td>shot dead</td>
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<td>46661</td>
<td>187</td>
<td>42</td>
<td>256</td>
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<td></td>
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<tr>
<td>found dead</td>
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<tr>
<td>shot sick</td>
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<td>15971</td>
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<td></td>
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<tr>
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<td>5581</td>
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<tr>
<td>no restriction area</td>
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<td>5143</td>
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<tr>
<td>CSF infected area</td>
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<td>27433</td>
<td>97</td>
<td></td>
<td></td>
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<tr>
<td>surveillance area</td>
<td></td>
<td>11623</td>
<td>5</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
Time series

Prevalence of serological investigations

<table>
<thead>
<tr>
<th>Time period</th>
<th>01.10.2002 - 15.11.2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viralogy</td>
<td>all</td>
</tr>
<tr>
<td>Serology</td>
<td>all</td>
</tr>
</tbody>
</table>

Graph showing the prevalence of serological investigations over time from 10/2002 to 11/2003.
Realisation (2)

- Data visualisation
  - HTML based visualisation of the data bases
    - table view
    - summaries of the CSF data base stratified for any possible time period e.g. by result, age class, restriction area or region
  - graphical visualisation of the data in time
  - map view by a GIS server
Current State (1)

Number of Records 1\textsuperscript{st} October 2002 – 31\textsuperscript{st} March 2010

Status: 29.04.2010
# Current State (2)

Number of Records 1\textsuperscript{st} January 2002 – 29\textsuperscript{th} April 2010

<table>
<thead>
<tr>
<th>Member state</th>
<th>No. of registered records</th>
<th>No. of investigated animals</th>
<th>No. of virological investigations</th>
<th>No. of serological investigations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>7,817</td>
<td>7,758</td>
<td>7,683</td>
<td>5,693</td>
</tr>
<tr>
<td>France</td>
<td>70,363</td>
<td>69,408</td>
<td>64,986</td>
<td>66,488</td>
</tr>
<tr>
<td>Germany</td>
<td>294,215</td>
<td>294,018</td>
<td>276,802</td>
<td>287,951</td>
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<tr>
<td>Luxembourg</td>
<td>16,067</td>
<td>16,060</td>
<td>12,024</td>
<td>14,534</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>2,886</td>
<td>2,882</td>
<td>91</td>
<td>2,882</td>
</tr>
<tr>
<td><strong>Sum</strong></td>
<td><strong>391,348</strong></td>
<td><strong>390,126</strong></td>
<td><strong>361,586</strong></td>
<td><strong>377,548</strong></td>
</tr>
</tbody>
</table>

Status: 29.04.2010
Current State (3)
1st January 1999 – 29th April 2010 (additional data)

<table>
<thead>
<tr>
<th>Member state</th>
<th>No. of registered records</th>
<th>No. of investigated animals</th>
<th>No. of virological investigations</th>
<th>No. of serological investigations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>7,817</td>
<td>7,758</td>
<td>7,683</td>
<td>5,693</td>
</tr>
<tr>
<td>France</td>
<td>70,363</td>
<td>69,408</td>
<td>64,986</td>
<td>66,488</td>
</tr>
<tr>
<td>Germany</td>
<td>318,378</td>
<td>318,176</td>
<td>298,122</td>
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<tr>
<td>Luxembourg</td>
<td>16,067</td>
<td>16,060</td>
<td>12,024</td>
<td>14,534</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>2,886</td>
<td>2,882</td>
<td>91</td>
<td>2,882</td>
</tr>
<tr>
<td><strong>Sum</strong></td>
<td><strong>415,511</strong></td>
<td><strong>414,284</strong></td>
<td><strong>382,906</strong></td>
<td><strong>400,760</strong></td>
</tr>
</tbody>
</table>

Status: 29.04.2010
Current State and Aim

- Transparent representation of the epidemiological situation on CSF between the member states
- Up-to-date report of the course of infection in the different countries
- Evaluation of the data in time and space considering restriction and vaccination areas
- Advantages in the scientific assessment of the disease situation in different regions
- Easing the production of official reports
Data Base Principle

• Defined user group via authentication (user name and password)
• User management based on the principles of TRACES
• Encoded communication using standard internet browsers
• Web server for data input and visualisation
To login to the CSF database-system, you need enter your E-Mail address and Password. Please confirm the entered fields by clicking on the Login button. If you have any problems regarding the login, please don't hesitate to send a mail to csf-db@fli.bund.de.

If you have forgotten your password, click here.

Your e-mail address: 
Your password: 

For password, please differentiate upper and lower case!
Welcome to the Classical Swine Fever in Wild Boar surveillance database

Please note that: This web page is optimized for the use of Internet Explorer 7/8 and best viewed with a minimum resolution of 1024x768 pixel. For a smooth representation of this web page, we recommended to allow this page in any Popup-blocker solutions!

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Data Base Structure (1)

- Central **CSF** data base
  - 1 record for each wild boar shot or found dead
  - Division into 3 parts
    - Unique identification of wild boar, municipality, age and date of shooting/finding
    - laboratory results (virology, serology)
    - official judgement (confirmation by competent authority)
Data Base Structure (2)

• Central **region** data base
  – 1 record for each region and each period
  – Division into 3 parts
    - CSF infected, surveillance and vaccination area
    - identification of region and period for which data are valid
    - geographical data (selection on the basis of municipalities)
Central CSF Data Base
(data, queries, web server)

Departments, Districts and Laboratories

Desktop application

CSV-file upload

Web formular

CSFDB-Data-Provider

Vaccination

Virus Age Serology Virology

EC, CRL

Departments Districts

Laboratories

Competent Authorities

Ministries
Implementation (1)

- Extension of the existing CSF in wild boar surveillance database of Belgium, France, Germany, Luxembourg and The Netherlands for all other MS with emphasis on currently affected countries
- Update of the technology using the experiences of the German ADNS (TSN) and several DG Research projects, e.g. New FluBird, EPIZONE, CSF&Vaccine
Implementation (2)

- Implementation and updating of all features of the current surveillance data base including time series analysis, prevalence calculations, export of aggregated tables to MS EXCEL and map server
- Furthermore, development of standardized reports for CRL and EC
- Implementation of a user controlled email notification system highlighting changes in the data base (“early warning function”)
Timetable (1)

• Development phase scheduled for 2010 for programming, integration of new participating member states including training and test phase

• Support phase will start in 2011 and will include software maintenance, hotline support, integration and training of other member states and potential new member states
Timetable (2)

• First and second quarter 2010
  – Implementation of basic features of the database

• Third quarter
  – Detailed information regarding data requirements and data exchange formats
  – Short questionnaire regarding contact persons (administrative and IT) and data infrastructure
  – Integration of the current participating member states and test phase
Timetable (3)

• Fourth quarter 2010
  – Integration of all other member states with emphasis on currently affected countries
  – Training and test phase

• First January 2011
  – Data base fully operating and start of support phase
Thank you very much for your attention!