EPIZONE: Highlights of five year international collaboration on risk assessment

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Outline

- Approaches adopted
- Scientific and networking highlights
- Real outcomes
- “Personal” benefits

Approaches adopted

- Review published risk assessments
  - What is out there? → WP 7.1
  - How good is it?

- Collect and synthesise data
  - Online database → WP 7.2
  - Expert system → WP7.3
  - Elicitation of expert opinion → WP7.4
    - → Expert questionnaire session

- New applications
  - Climate change → WP 7.4
  - Genomics

Review of published import risk assessments (IRAs): WP7.1

- Many reports, few peer-reviewed
- Peer-reviewed, quantitative IRAs had higher scores
- IRAs following OIE guidelines did not have higher scores
- Weak spots: risk communication and data uncertainty
- Although guidelines are available, not always adhered to

Synthesising data: online database: WP7.2

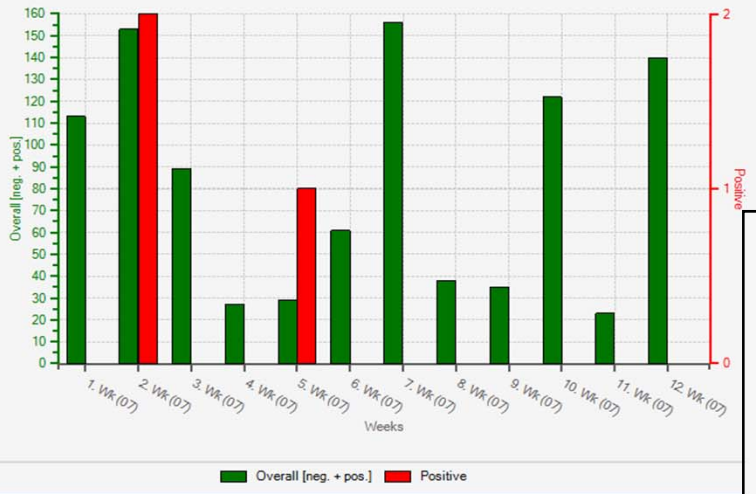
- Definition of a standardised data set
  - Suitable to ‘tap’ existing databases in all partner states
- European Online Data Base on Epizootic Diseases went online on 23 October 2008
- Interface to molecular typing databases
- Tools for automated reporting and time series analysis
- Map server and mapping tools
- Automated Alert System (AAS)
- *Extensive collaboration*

EPIZONE

EPIZONE MapServer BETA 2

Dynamic charts by time series (AI)

Data aggregation based on genetic detection (negative and positve results)



Get data table as Micros

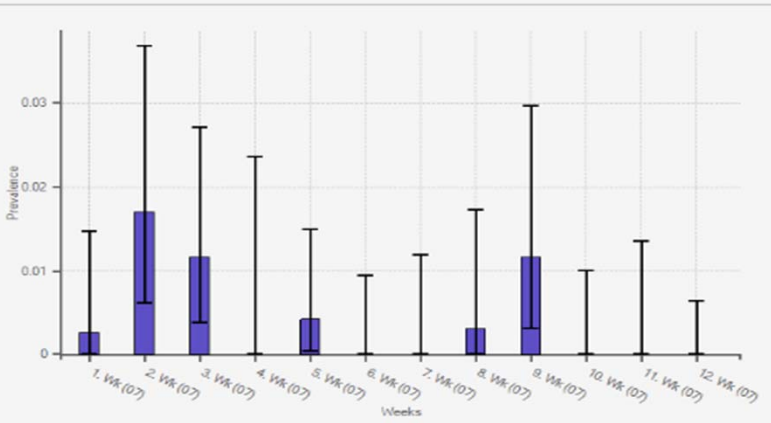
	Totals	1. Wk (07)	2. Wk (07)	3. Wk (07)	4. Wk (07)	5. Wk (07)	6. Wk (07)	7. Wk (07)	8. Wk (07)	9. Wk (07)	10. Wk (07)	1
Positive	3	0	2	0	0	1	0	0	0	0	0	
Overall [neg. + pos.]	986	113	153	89	27	29	61	156	38	35	122	

Map overview

Data aggregation based on genetic detection (negative and positve results)

Refresh

Confidence level in percent: 95 (50% - 99%) Maximum range of Y-axis: auto (0.0 - 1.0)

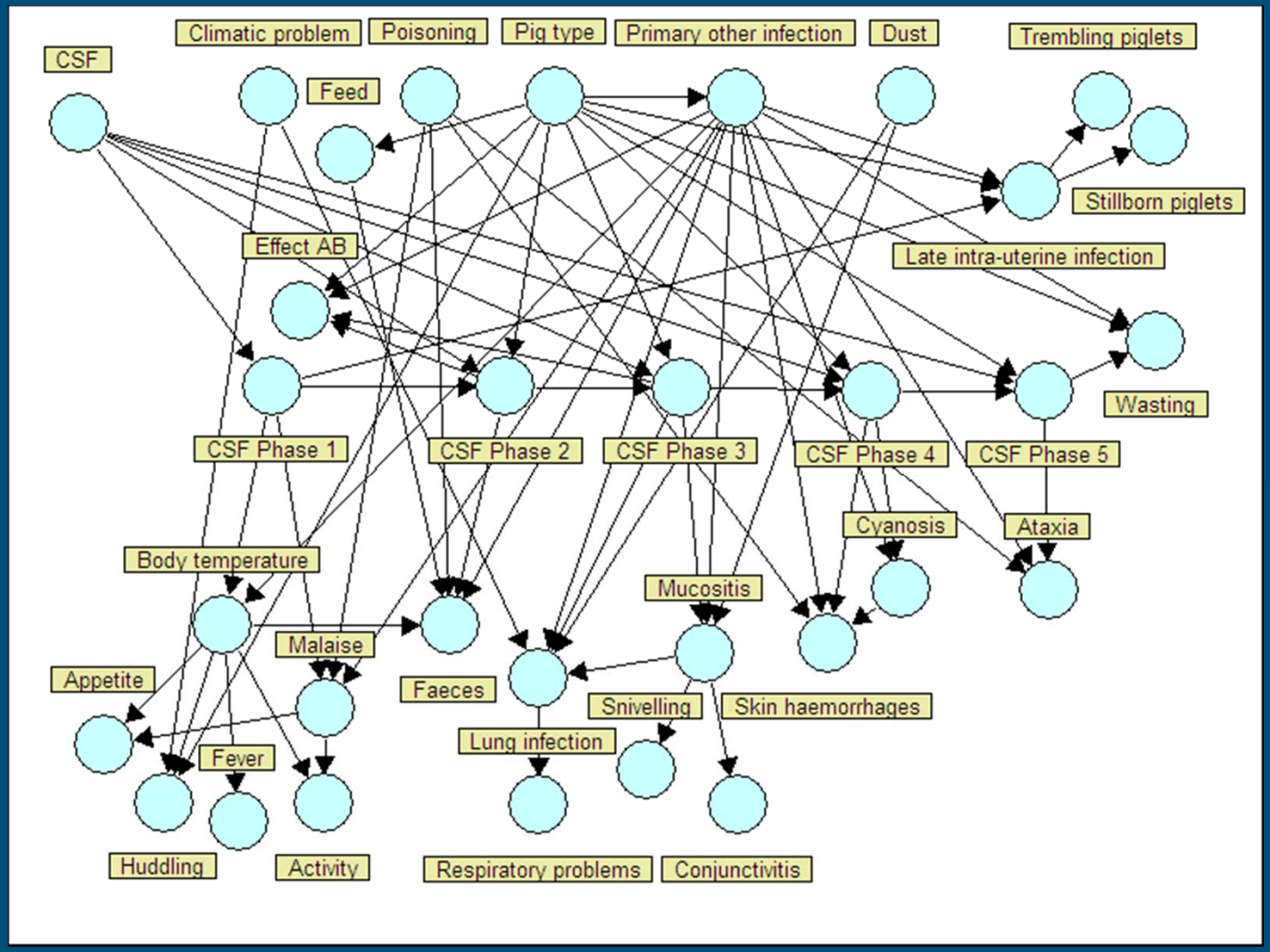


Get data table as Microsoft Excel file:

	1. Wk (07)	2. Wk (07)	3. Wk (07)	4. Wk (07)	5. Wk (07)	6. Wk (07)	7. Wk (07)	8. Wk (07)	9. Wk (07)	10. Wk (07)	11. Wk (07)	12. Wk (07)
CL_u	0.01478	0.03678	0.02710	0.02360	0.01501	0.00957	0.01195	0.01735	0.02966	0.01006	0.01358	0.00647
P	0.00262	0.01705	0.01168	0	0.00415	0	0	0.00308	0.01166	0	0	0
CL_l	0.00004	0.00623	0.00376	0	0.00046	0	0	0.00005	0.00313	0	0	0
x	1	6	5	0	2	0	0	1	4	0	0	0
n	382	352	428	204	482	508	406	325	343	483	357	753

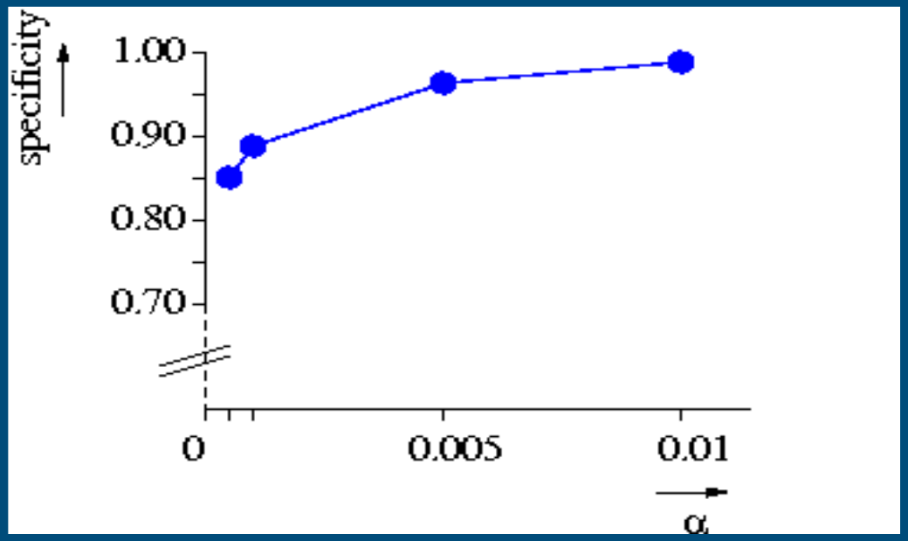
Explanation: CL_u = upper bound of confidence limit, P = prevalence, CL_l = lower bound of confidence limit, x = total number of positive results, n = number of all tested species (negative + positive results)

Synthesising data: Clinical decision support system: WP7.3



Synthesising data: Clinical decsion support system

Estimate of **Specificity** of CDSS (for several threshold probabilities of CSF infection) using field data from eleven Dutch veterinary practitioners and five Belgian, Danish, Italian and German veterinary practitioners : a total of 408 cases with clinical problems on pig farms were collected



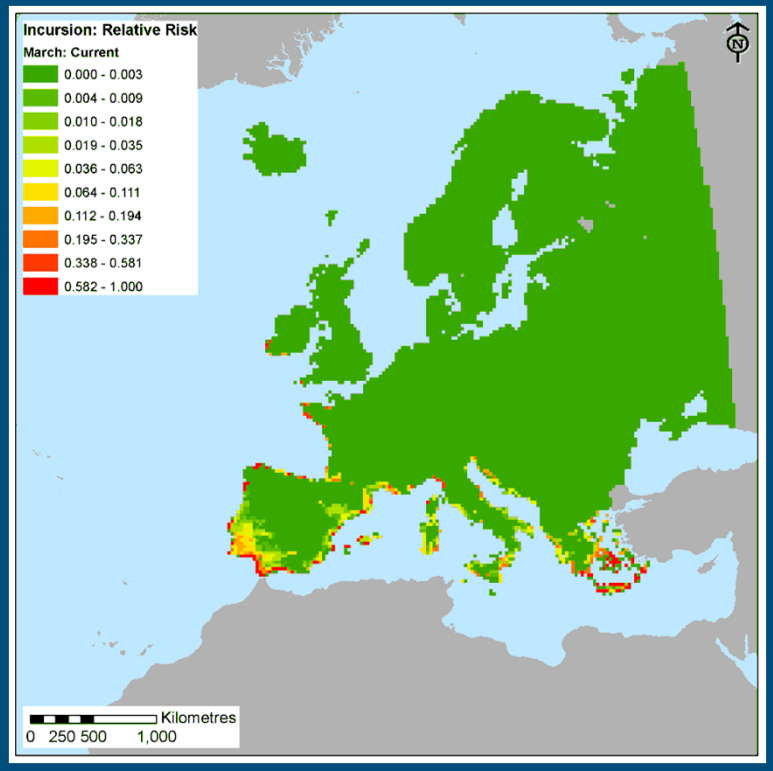
For CSF virus strains with high virulence (Brescia, UK 2000) the CDSS is able to detect infected piglets 5-7 DPI

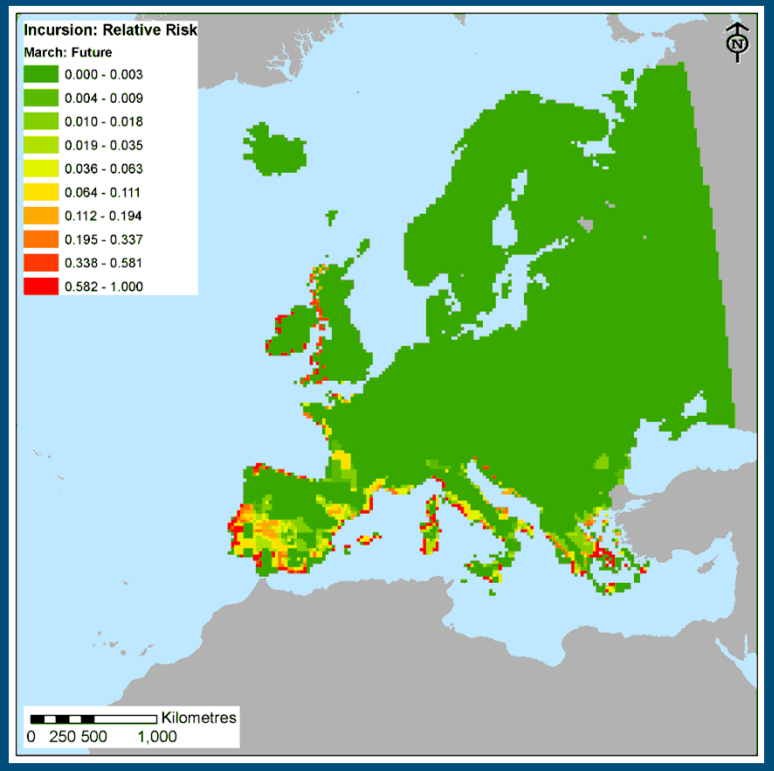
For CSF virus strains with moderate virulence (Paderborn, Thai CBR/93) the CDSS is able to detect infected piglets 14-17 DPI

Synethesising data: Expert opinion workshop: WP7.4

- November 2007 – to assess the impact of climate change on five vector-borne livestock viruses
- Conclusions:-
  - Currently, risks from ASFV and WNV are greater, but climate change will increase the overall risk of AHSV, CCHFV and RVFV incursions into the EU with ASFV and WNV being less affected
  - Climate change is predicted to increase the risk of incursion through the vector route for all five viruses to some degree, the strongest effects being predicted for AHSV, CCHFV and WNV

New approaches: GIS and climate change: WP7.4





Real outcomes

- Online database for Epizootic diseases
- Validated clinical decision support system
- Peer reviewed publications (3 published, several more in preparation) and scientific presentations (over 20)
- Collection and analysis of scientific expertise

“Personal” benefits

- Novel ways of approaching risk assessment
- Interest and interaction expanded over the years
- Collaboration increased
  - Within and across theme(s)
- Greater acceptance and understanding
- Needs to continue and further expand