Rotz und Brucellose-
re-emerging diseases als globale Bedrohung

Heinrich Neubauer

Risiken entlang globaler Lebensmittel-Warenketten
BfR, Berlin, 18.02.2016

- ***Burkholderia mallei***
  - Gram-negativ, unbeweglich
  - intrazellulär
  - umweltlabil (Hitze, UV, Trockenheit)
  - in Ställen bis zu 90 Tage überlebensfähig
  - Genom 5,8 Mb
  - eng verwandt mit *B. pseudomallei* - Melioidose

- **Zoonose**
  - zwischen Tier und Mensch übertragbar
  - Sicherheitslabor Stufe 3

Chronisch infiziertes Pferd =
einziges Reservoir

Allgemeine Symptome

- Fieber
- Verschlechtertes Allgemeinbefinden
- Abmagerung durch Auszehrung

Selten

- Gelenke, Knochen und Muskulatur
- Hirnhäute und Gehirn
- Orchitis, Mastitis

Rotz wurde in Europa und Nordamerika bis 1970 getilgt

- Routinetestung (Mallein oder CFT)

- Keulen

- Strikte Importkontrolle

Vet Rec. 1999 Mar 6;144(10):255-8.

Equine glanders in Turkey.

Arun S Neubauer H Gürel A Ayyildiz G Kuscu B Yesildere T Meyer H Hermanns W

Source

Institute for Animal Pathology, University of Istanbul, Turkey.

Abstract

In the course of an epidemiological study of glanders on a number of Turkish islands in the Sea of Marmara, **1128 horses** were examined by using the intracutaneous mallein test. Thirty-five (**3,1 %**) developed an increase in rectal temperature and a swelling at the point of injection. Ten of these horses were killed and glanders was confirmed in **five cases** (**1,6%**) by the presence of lesions and by the immunohistological demonstration of the causative agent, Burkholderia mallei. Clinical and pathological findings indicated that in all cases the infection was restricted to the mucous membrane of the nasal cavity with its parasinus, the nostrils and the upper lips. It was confirmed that equine glanders is endemic in Turkey.

Rotz-Status OIE, gemeldete Rotz-Fälle von 2005-2015

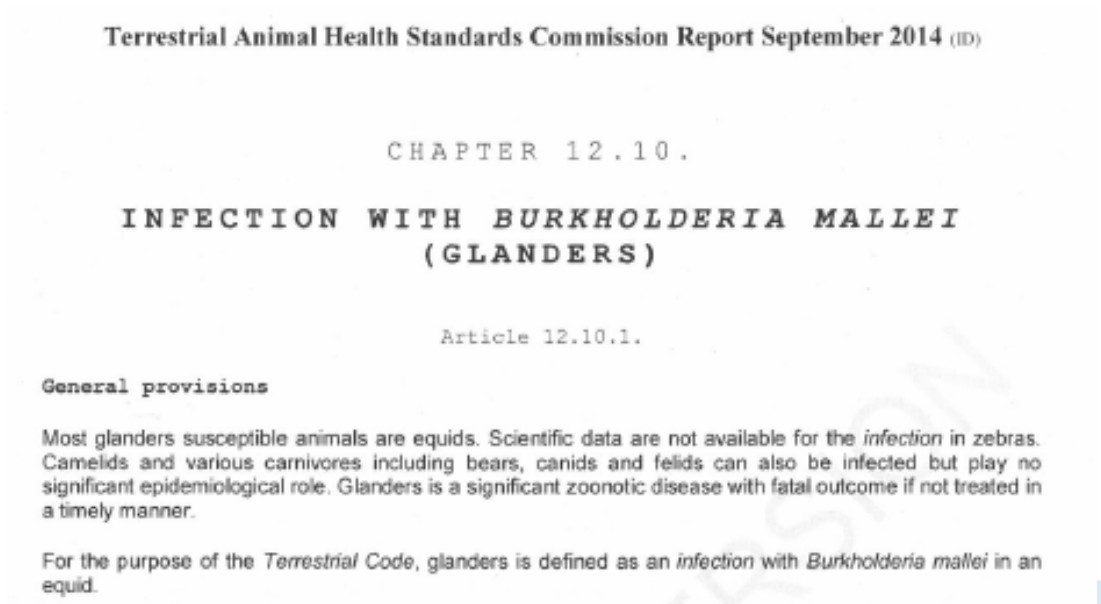
2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Brasilien	**Brasilien** Eritrea **Indien**	**Brasilien** **Indien** **Iran** Mongolei Russland	**Brasilien** **Indien** **Iran** Mongolei	**Brasilien** **Indien** **Iran** Kuwait Mongolei Myanmar	Bahrain **Brasilien** Eritrea **Indien** **Iran** Kuwait Mongolei Myanmar Pakistan	Afghanistan Bahrain **Brasilien** **Indien** **Iran** Libanon Myanmar Pakistan	Afghanistan **Brasilien** **Indien** **Iran** Pakistan	**Brasilien** **Indien** **Iran** Pakistan Russland	**Brasilien** Deutschland **Indien** **Iran** Irak	**Brasilien** **Indien** **Iran**

- Wiederaufflammende Tierseuche
- Ausbreitung in Endemiegebieten
- Einschleppungsgefahr in rotzfreie Regionen
- Fallbeispiele Deutschland 2006 / 2014

OIE World Animal Health Information System Online im Internet:
http://www.oie.int/wahis_2/public/wahid.php/Diseaseinformation/Diseasetimelines; Stand: Januar 2016

Internationale Handelssperren nach Meldung an die OIE

Equiden
Samen von Hengsten
Embryonen



Terrestrial Animal Health Standards Commission Report September 2014 (ID)

CHAPTER 12.10.

INFECTION WITH *BURKHOLDERIA MALLEI* (GLANDERS)

Article 12.10.1.

General provisions

Most glanders susceptible animals are equids. Scientific data are not available for the *infection* in zebras. Camelids and various carnivores including bears, canids and felids can also be infected but play no significant epidemiological role. Glanders is a significant zoonotic disease with fatal outcome if not treated in a timely manner.

For the purpose of the *Terrestrial Code*, glanders is defined as an *infection* with *Burkholderia mallei* in an equid.

AHN

Date : 2011/06/07 - 11 : 17
Number of readings : 317

http://www.bna.bh/portal/en/news/459934

Manama–June7 (BNA) Supreme Council for Youth and Sport first deputy chairman and Bahrain Royal Equestrian and Endurance Federation Shaikh Khalid bin Hamad Al-Khalifa today received European Commission experts Dr. Sfano Sutiji, Dr Penoint Svorsi and Dr. Fusail, who arrived in Bahrain to draft a report on lifting the bank on the Kingdom regarding the glanders outbreak. Endurance Committee Chairman Shaikh Faisal bin Rashid Al-Khalifa and Municipalities and Urban Planning Affairs Minister Dr. Juma'a bin Ahmed Al-Kaabi also attended.

The delegates will ensure the EU terms and regulations are being strictly implemented for owners of stables to get the green light to transport their horses abroad and take part in equestrian and endurance events. Muharraq Municipality director general and National Anti-Glanders Committee attended the meeting along with Breef secretary general Ghaleb Al-Alawi, director Haidar Al Zogby, and Shaikh Khalid's Personal Bureau director Rashid Al-Shaikh.

COMMISSION IMPLEMENTING DECISION

of 18 August 2011

amending Annex I to Decision 2004/211/EC as regards the entries for Bahrain and Lebanon in the list of third countries and parts thereof from which the introduction into the Union of live equidae and semen, ova and embryos of the equine species are authorised

(notified under document C(2011) 5863)

(Text with EEA relevance)

(2011/512/EU)

The following Box 4 shall be added to Annex I to Decision 2004/211/EC:

'Box 4:

BH	Bahrain	BH-1	Delimitation of the southern part of the main island of Bahrain Northern boundary: From the West coast at the end of Zallaq Highway at the entrance of Sofitel Hotel in an easterly direction along Zallaq Highway to the junction with SHK Khalifa Highway, proceeds along SHK Khalifa Highway in a northerly direction until the boundary of Al Rawdha, demarcated by the wall of the Kings Palace, proceeds along the boundaries of the area of Al Rawdha in easterly direction to the roundabout at Al Safra on the SHK Salman Highway and further in a southerly direction to the roundabout at the entrance to Awali village, proceeds along Muaskar Highway in an easterly direction to the roundabout at Al Esteglal Highway/Hawar Highway and further in a southerly direction on Hawar Highway until that terminates at the eastern coast at the entrance of the village of Askar.

Rotzausbruch 2014/15 in Deutschland

Sportpferd, geboren 2008 in SH

Vorbereitung zum **Export nach USA**:
guter Allgemeinzustand, keine offensichtlichen klinischen Symptome

Einsendung einer Serumprobe zur Untersuchung auf Rotz

Positiver Befund

Information der Drittländer über den Rotz-Fall

Konsequenzen:

Sperrung von Deutschland für **Pferde- und Samen**import:

Indonesien, Russland, Brasilien, Schweiz, Kolumbien, Taiwan, Chile, Mexiko, Korea, Japan, Indien, Hong Kong, China, USA, Philippinen, Peru, Kanada, Australien

Einige Drittländer genehmigen den Export unter Sonderbedingungen

Epidemiologische Untersuchungen

Keine epidemiologischen Anhaltspunkte, aber indirekte Kontakte nach Südamerika!

Alle Tiere des Bestandes wurden negativ mit KBR getestet.

Untersuchung der 398 Kontaktpferde (in zehn anderen Bundesländern), die zeitgleich mit dem Sportpferd im Betrieb standen, aber mittlerweile verbracht worden sind - alle negativ

Exportuntersuchungen ca. 7200 Pferde im Jahr 2014 und 2015 negativ im Hinblick auf das Vorliegen von Rotz negativ getestet

Nature of diagnosis	Laboratory (advanced)
This event pertains to	a defined zone within the country
Related reports	Immediate notification (30/01/2015) Follow-up report No. 1 (09/02/2015) Follow-up report No. 2 (12/05/2015) Follow-up report No. 3 (29/06/2015)

Outbreaks	There are no new outbreaks in this report

Epidemiology

Source of the outbreak(s) or origin of infection	Unknown or inconclusive
Epidemiological comments	The affected holding had been put immediately under restriction following the first serological positive test (1 December 2014). Other 30 equines kept on the affected holding have been investigated three times every two weeks with negative results (clinically checks and CFT). Cleansing and disinfection of the affected holding has been carried out and finished on 27 January 2015. The infection with B. mallei has been resolved from 27 January 2015. Epidemiological investigations and tests on traceability were initiated directly after the first serological finding. It was established that the affected horse had never been moved to other Member States or third countries. 398 contact horses were ascertained in other holdings in Germany. All contact horses have been tested negative for glanders. In addition to this, tests for export to third countries were carried out on 4,694 horses in 2014 and 2,665 horses in 2015 (as of 13 June 2015 = end of six-month period following the killing of the animal concerned); they all tested negatively for glanders. Neither in the framework of the passive monitoring (examinations of horses intended for slaughter or found dead) nor in the movement of horses from another Member State or the import of horses from third countries have the competent authorities in Germany received any information on symptoms that would have indicated the suspicion or outbreak of the notifiable disease "glanders". The cause for the introduction of B. mallei was not able to be determined, despite of intensive tests. The conclusion drawn from all tests carried out is that the case in question was an isolated case. In accordance with Article 12.10.2 of the OIE Terrestrial Animal Health Code Germany declares itself free of glanders with effect of 14 June 2015.

Case Report

Burkholderia mallei infection in a horse imported from Brazil

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Keywords: horse; glanders; *Burkholderia mallei*; infectious disease

Equine vet. Educ., 2009, 21, 147-150

Mai 2006, importierter Fall von Rotz

Einfuhr über Flughafen Frankfurt (Herkunft Sao Paulo)

Warenkette: Lebensmittel

Eselfleischexport aus Brasilien nach China: Eselburger

Pferdefleischimport aus Brasilien in die EU

Brucellose

Spezies	Biovar	Natürlicher Wirt	Humanvirulenz
Brucella melitensis	1-3	Schaf, Ziege	hoch
B. abortus	1-7 + 9	Rind	mittel
B. suis	1 + 3	Schwein	hoch-mittel
	2	Schwein, Hase	gering
	4	Rentier	-
	5	Nager	-
B. canis	-	Hund	gering
B. ovis	-	Schaf	-
B. neotomae	-	Buschratte	-
B. pinnipedialis	-	Robben	?
B. ceti	-	Delphine	?
B.microti	-	Feldmaus	?
B. inopinata	-	Mensch	ja
Brucella pabonis	-	Pavian	?

Tier: Wirtschaftlich schwere Schäden

- hohe Abortrate
- geringe Milchleistung
- Abmagerung
- Gelenkentzündung
- Infertilität

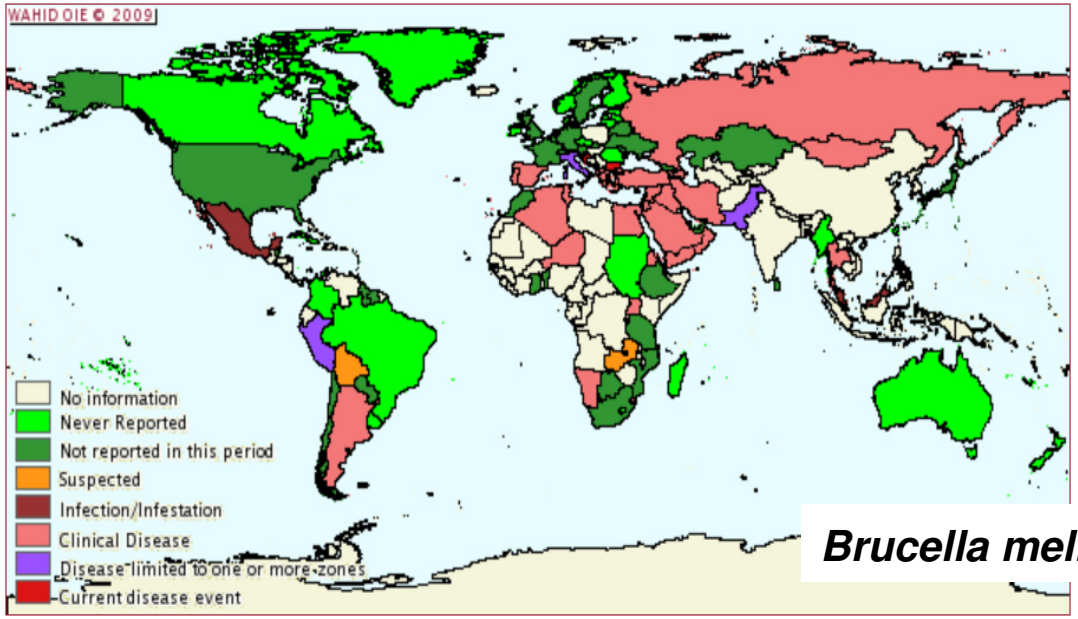
HANDELSBESCHRÄNKUNGEN


Camel Brand
Gozo
Cheeselets
150 Grms e
Ing: Milk, Rennet, Salt.
Manufactured by: J Aguis,
Best Before
17/01/03
Lot No.
1712
Keep Refrigerated
40c
Danish
Feta Cheese
100 Grms e
Ing: Pasrurisied Milk, Microbial
Rennet, Salt.
Best Before
10/01/03
Lot No.
1012
Keep Refrigerated
35c
5 350026 020014
Camel Brand Co. Ltd.
P.P. Mifsud Street
Zebbug ZBG 04 Malta
Tel: 466292 Fax: 463807

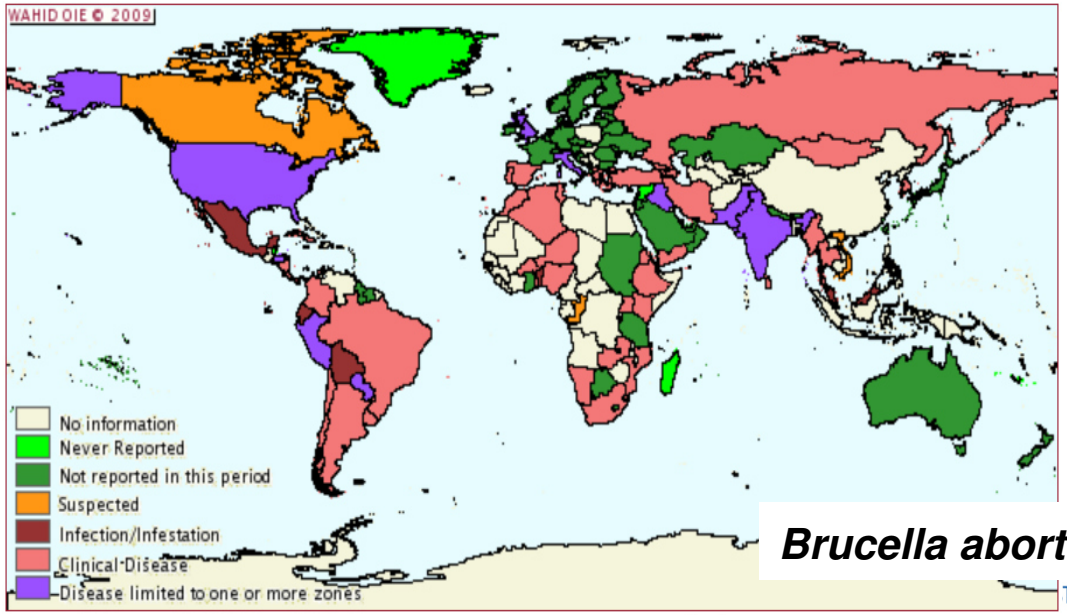
Unsymptomatische Symptomatik beim Menschen

Symptom	Patienten (%) mit Symptomatik akut (n=308)	subakut (n=50)	chronisch (n=42)	(%) total (n=400)
Hepatosplenomegalie	39	54	38	41
Arthritis	22	50	24	26
Splenomegalie	19	32	10	20
Hepatomegalie	8	2	5	7
Epidymo-Orchitis	6	8	5	6
Lymphadenopathie	9	2	1	3
Paralyse	1	0	17	2,2
Papillenödem	1	8	8	2
Nckensteife	1	2	3	1,5

höchst inkapazitierend – langwierige, belastende Therapie - schwerwiegende Spätfolgen

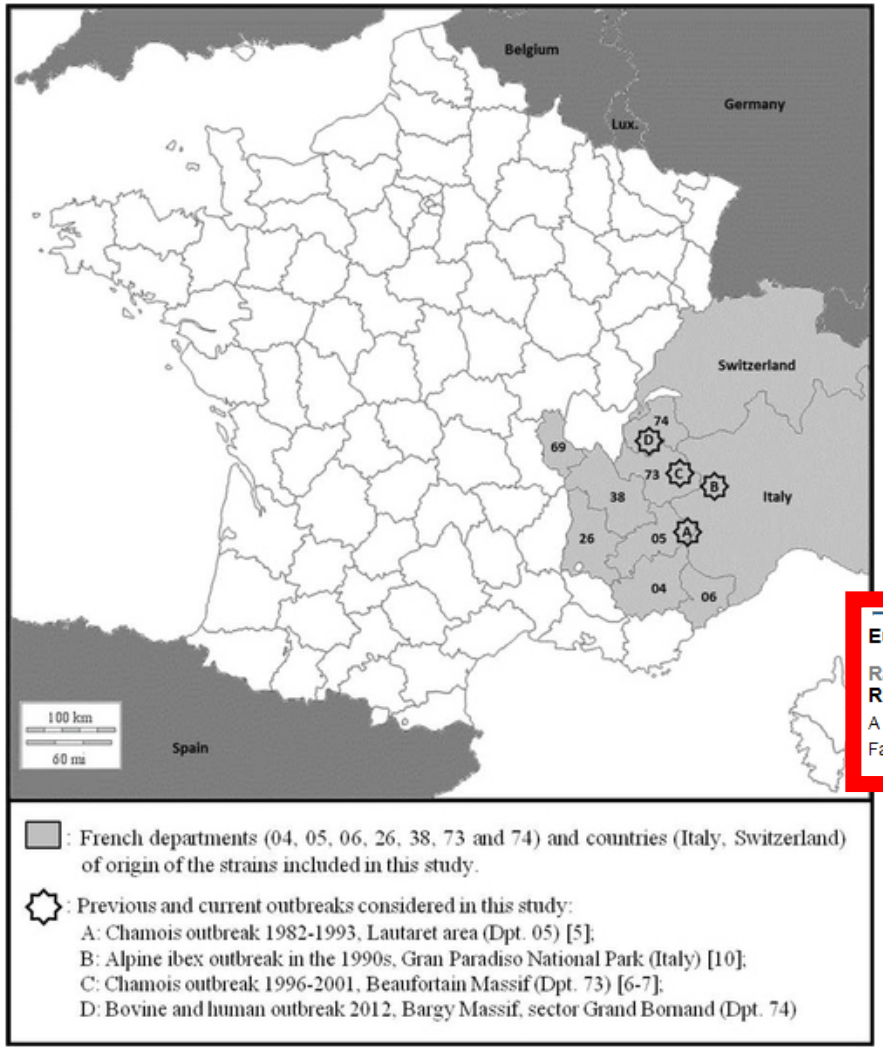


Brucella melitensis – Infektionen (Schaf, Ziege)



Brucella abortus - Infektionen (Rind, Kamel)

Survey area with current and previous *Brucella melitensis* bv 3 outbreaks in wild ungulates in the Alps.



: French departments (04, 05, 06, 26, 38, 73 and 74) and countries (Italy, Switzerland) of origin of the strains included in this study.

: Previous and current outbreaks considered in this study:
A: Chamois outbreak 1982-1993, Lautaret area (Dpt. 05) [5];
B: Alpine ibex outbreak in the 1990s, Gran Paradiso National Park (Italy) [10];
C: Chamois outbreak 1996-2001, Beaufortain Massif (Dpt. 73) [6-7];
D: Bovine and human outbreak 2012, Bargy Massif, sector Grand Bornand (Dpt. 74)

Mick V, Le Carrou G, Corde Y, Game Y, Jay M, et al (2014) Brucella melitensis in France: Persistence in Wildlife and Probable Spillover from Alpine Ibex to Domestic Animals. PLoS ONE 9(1): e94168. doi:10.1371/journal.pone.0094168
http://journals.plos.org/plosone/article?id=info:doi/10.1371/journal.pone.0094168

PLOS | ONE

Eurosurveillance, Volume 17, Issue 30, 26 July 2012

Rapid communications

RE-EMERGENCE OF BRUCELLOSIS IN CATTLE IN FRANCE AND RISK FOR HUMAN HEALTH

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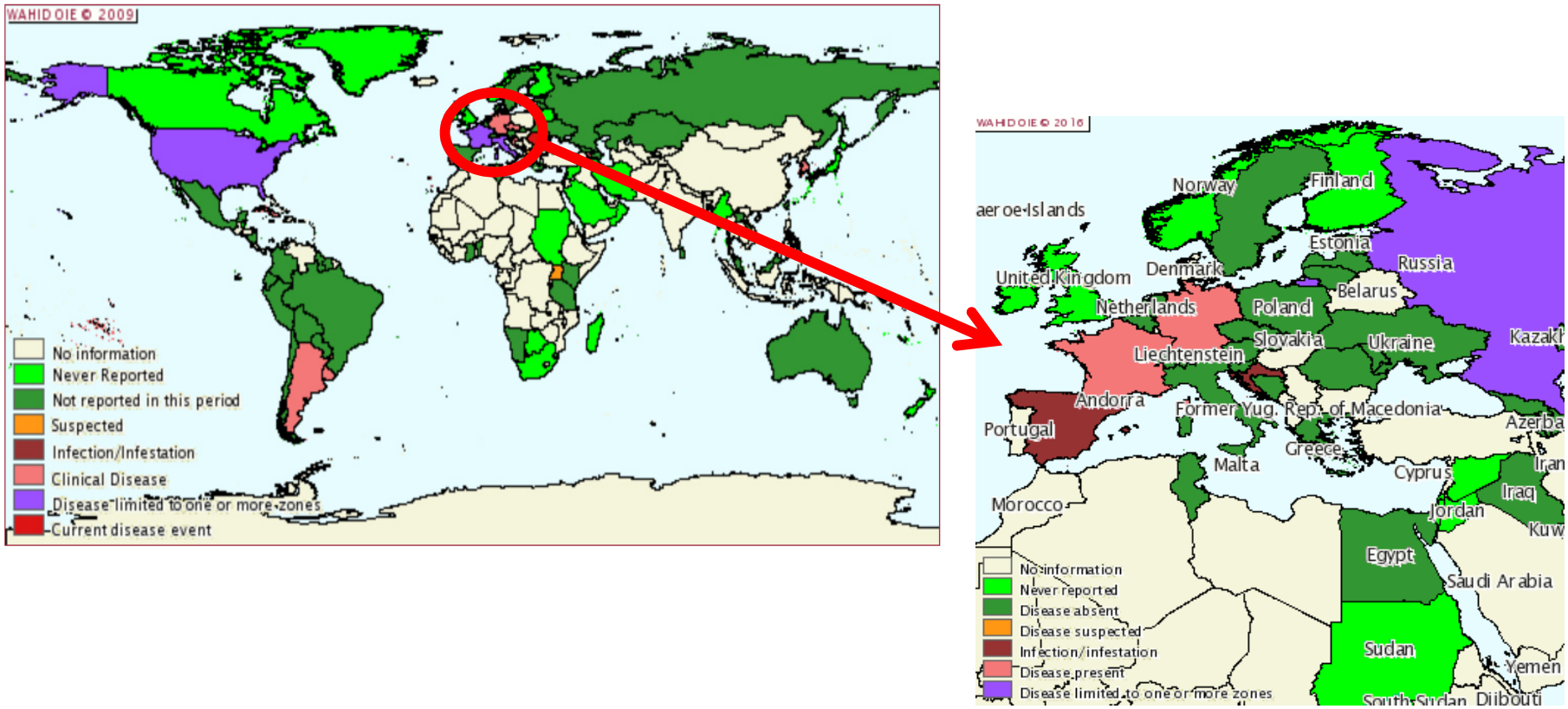
Brucella suis – Infektionen (Schwein)



Schweinebrucelloseausbruch (*Brucella suis* BV 2) ausgehend von Freilandschweinen aus MPV
Mit Beteiligung mehrerer Bundesländer