

Bovine brucellosis in an Austrian dairy herd

Dr Johann Damoser

BMASGK IX/B/10

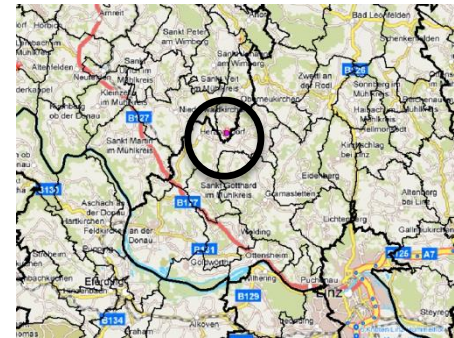
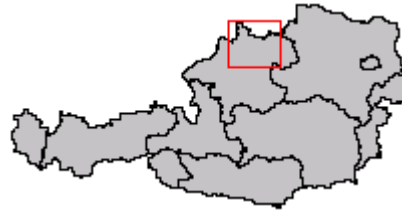
July 12/13 2018

Chronology of notification

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- **Notification of suspicion** of Brucellosis in an Austrian dairy herd on **21 Jun 2018**:
 - Antibody positive blood samples, tested in NRL
 - Since **January 2018** increased number of **abortions** in cows and calf deaths have occurred on the affected farm. The farm's veterinarian investigated and collected blood samples/aborted material
 - On 21 Jun holding was inspected by official veterinarian and placed under **official restriction**:
 - Restriction of animal movement and milk selling
 - Blood sampling of all animals
 - First epidemiological inquiry
 - NRL confirmed brucellosis via serology on 22 Jun 2018
 - NRL confirmed **Brucella melitensis via PCR on 25 Jun 2018**

Affected holding

- Dairy farm, district Rohrbach, Upper Austria (close to neighboring district Urfahr-Umgebung)



- **102 cattle** (51 cows, 32 animals > 6 month, 12 calves < 6 month, 7 bulls for beef production)
- The **milk** from the affected farm is **pasteurized** (raw milk has never been marketed)
- **No further susceptible animal species** on holding (besides the temporary holding of 1-2 pigs for self consumption; not at present)

Measures on affected holding

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- All animals on holding were blood/milk sampled and serologically tested
 - **51 cows** were serologically **positive** and **culled together with calves** on 27 June
 - **10 out of 32 heifers** were serologically **positive** and **culled** on 29 June
 - **22 serologically negative heifers and 7 bulls** were **slaughtered under official control**, samples were taken to demonstrate disease freedom, results are pending
 - Farm empty since 2 July

Epidemiological investigation - animal movement

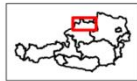
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- Animal movement **to** affected holding:
Since 2012 no **introduction** of cattle or other susceptible species into holding with the exception of **2 heifers on April 2018**
2 heifers were from the same Austrian **holding** (Lower Austria): already **inspected** by official veterinarian; all samples taken are **serologically negative**
- Animal movement **from** affected holding in 2018:
 - Only within Austria:
8 contact holdings were identified
All contact holdings were inspected; samples taken from contact animals are serologically negative

Retrospective analysis of routine surveillance in affected districts

Number and location of serological brucellosis investigations as **part of routine surveillance** in districts Rohrbach and Urfahr-Umgebung from January to June 2018:
all negative

Beprobte Betriebe seit 1.1.2018



- Verdachtsbetrieb
- Proben BLI Blut
- Proben BLI Milch
- Proben BMEL Schafe
- Proben BMEL Ziegen



Red - affected holding
Purple - blood/milk serology in cattle
Green - blood serology in goat/sheep

0 5 10 20 km

Erstellt am 2018-06-27



Enhanced surveillance measures in affected districts

- **All dairy farms in districts Rohrbach and Urfahr-Umgebung** are checked on a regular basis via **milk-serology** (approximal 1500 holdings)-first complete **results expected in July**
- **Goat and sheep farms** in an area of approximately **3km around** affected holding were inspected and blood samples serologically analyzed (all negative)
- **Direct marketers** (milk, meet) in neighbouring communities were inspected and, if present, susceptible animals sampled (all serologically negative)
- **Neighbouring holdings** were inspected and, if assumed necessary, animals tested (all serologically negative)

Human case

- **Veterinarian** in charge of affected holding was **hospitalized** in June due to a febrile illness; blood **cultures confirmed** infection with *Brucella melitensis*
- It is highly likely that veterinarian contracted the disease during a visit on affected holding
- Affected veterinarian **services farms in districts Rohrbach und Urfahr-Umgebung, which are put under enhanced surveillance measures** (periodic investigation via milk serology)

Epidemiological inquiry - currently
no clear hint for the probable
introduction of disease

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- Holding has respected **biosecurity measures** (no animal introduction since several years, spatial separation between cows and younger animals, no participation in cattle shows)
 - Animals were **not pastured**
 - **Only artificial insemination** via veterinarian
 - No contact to small ruminants or camelids
 - No dog on holding
 - No history of vacation trips to Brucella endemic countries of animal care personnel
 - Only feeding of home-made food (silage)

History of brucellosis in Austria

- Brucellosis is a very rare disease in humans and animals in Austria.
- In Austria, during the last decade, between 1 and 7 imported cases per year were found in humans. In 2018, 2 cases of brucellosis have been reported in humans.
- In Austria, the **cattle population (since 1999) and the sheep and goat populations (since 2001)** are officially recognized **free** of this pathogen.
- The last reported cases of bovine brucellosis (*B. abortus*) were 1986, *B. melitensis* was never detected before in cattle.

THANK YOU