Detection of bovine brucellosis in two Austrian dairy herds and control measures applied

Follow-up report- Austria

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Chronology of notification on first affected farm

• **Notification of suspicion** of Brucellosis in an Austrian dairy herd on **21 June 2018**
  – NRL reported antibody positive blood samples

• On 21 June holding was inspected by official veterinarian and placed under **official restriction**

• NRL confirmed **Brucella melitensis** by PCR on **25 June 2018**
Measures on first affected holding

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

- All animals (102 cattle) killed or slaughtered under official control
- Farm is empty since 2 July
- Cleaning and disinfection in progress
Enhanced surveillance measures in affected districts

- All dairy farms (1429) in districts Rohrbach and Urfahr-Umgebung were investigated by tank milk serology - all negative, except one neighbouring farm (see next slide)

- 146 goat/sheep/new world camelid farms and 29 mother cow farms located in an area around affected holding were inspected and blood samples serologically analysed - all negative

- 34 mother cow farms with suspicious symptoms (dead calves in 2018) in districts Rohrbach and Urfahr-Umgebung were inspected and blood samples serologically analysed - all negative

- 10 direct marketers (milk, meet) in neighbouring communities were inspected and, if present, susceptible animals sampled - all serologically negative
Second affected holding

- Dairy farm, district Rohrbach
- Direct neighbour of first affected farm, is serviced by the same veterinarian
- 53 cattle
- Serological tank milk examination was suspicious on 16 July
- All animals on holding were blood/milk sampled and serologically tested
  - 1 cow was serologically positive on 20 July, no isolation of agent possible
  - Seropositive animal was culled together with its 4-month old sero-negative calf
  - Epidemiological investigation revealed that veterinarian treated sero-positive cow for placental retention on the same day after visiting the first affected farm for the same reason
  - Other animals on holding are repeatedly serologically negative
- The milk from the second affected farm has always been pasteurized (raw milk has never been marketed)
- Farm is currently under official supervision with restrictions regarding animal movement and milk selling (mandatory pasteurization)
Epidemiological investigation in second affected holding

- **Animal movement in 2018:**
  - Only within Austria

  **5 contact holdings** were identified; all contact holdings were inspected and samples taken from contact animals were serologically negative

  - No Intra-Union trade
Enhanced surveillance measures in holdings serviced by affected veterinarian

• As epidemiological investigation revealed it is likely that infection of cow in 2nd holding is linked to visit by veterinarian treating on antigen-positive holding.

• Identification of identical agent in affected cattle herd and diseased veterinarian by NRL

• All farms with susceptible animals serviced by this veterinarian in 2018 (in total 164) were controlled and serologically tested (all negative).
5 human infections reported

- Veterinarian attending both affected holdings
  - 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 first affected holding – same agent identified
  - supervised farms in districts Rohrbach und Urfahr-Umgebung were put under enhanced surveillance (all with negative results, except 2nd affected cattle holding in close vicinity which was treated by this veterinarian)

- 3 family members of first affected farm
  - farmer and one of his children (a second child is serologically positive only)

- Companion of first veterinarian showed suspicious clinical signs end of August and was confirmed positive for B. melitensis beginning of September; treatment of retentio secundinarum in first affected farm in May 2018
Epidemiological investigations

• Agent from affected cattle herd shows relation to isolate from Piemont, but
  – relationship not very close
  – certainly not all isolates entered into database

• **Same agent isolated from antigen-positive cattle herd and humans, in all cases where agent could be isolated**

• High infection rate in antigen-positive cattle herd due to abortions in stable which allows free movement of animals

• Only minimal amounts of bacteria necessary to start infection

• **Involvement of veterinarian in transmission between the two positive cattle herds most probable**

• **Origin of agent still unclear**
Further measures

• All holdings at risk – including those visited by infected companion veterinarian – identified and checked with negative results.

• Conclusion meeting in October with all authorities and parties involved.

THANK YOU