

## **BTB situation in Germany by Sabine Zentis:**

I tried to put together some information on the bTB situation in Germany. I learned from a vet in Belgium yesterday that there is at least one dairy farm, close to the border with Germany, under restrictions as test results revealed 22 positives. I have no additional information about the situation there and for Germany information is very sketchy.

There have been "isolated" cases of bTb in cattle herds in Germany, tracing back has revealed that the initial herds must have been infected about 2 years ago and have, through sales of cattle, infected other herds. The Government is planning to implement legislation to test the whole bovine population (>24 month) for bTB until the end of 2009. So far it is not clear what test will be used in addition to skin test.

All cases so far have been detected post mortem at slaughterhouse surveillance and in most cases it turned out that bTb has been around in the herds concerned for at least 2 years without any obvious clinical signs. Tracing of animal movements from holdings has revealed cases in additional herds and in some cases it could be established that bTb must have been around for at least 2-3 years without any clinical signs.

The way of introduction of bTb is not clear but officialdom tries to blame "migrants", farm workers from eastern Europe. What they forget mention is that imports of veal calves from countries like Estonia, Lithuania or Latvia are very common with wagonloads of calves being imported every week. So far it is not clear whether wildlife in Germany might act as a reservoir as cases are confirmed still at a very low level. With extremely high numbers of wild boar we might be up for some real trouble. It is very difficult to get the exact numbers of holdings involved and the location as no official reports have been issued. Especially cases of Johne's disease in wild deer and subsequently in cattle grazing the same fields might add to the problem when it comes to the whole herd testing as cross reactions with other mycobacteria are known to occur.

human cases of tuberculosis have been as follows, also there is not always a differentiation of species of the bacterium. I copied the information from the website of the BfR, most of the yearly reports have summaries in English.

<http://www.bfr.bund.de/search/search.php?words=Tuberkulose;page=2>

more interesting information

<http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=8075>

Obviously, human infection by *M. bovis* is still very rare and a large number of cases of human tuberculosis in Germany is detected in migrants from eastern Europe. In some years up to 50% of cases are "imported". A very worrying development are the multiresistant and XDR resistant mycobacteria, 50% of these are detected in immunodeficient patients (HIV). Clusters are in the Kaliningrad area (bordering Poland) and Latvia. I have attended a workshop on emerging diseases (human/animal) last week and it was stated that between 5% and 10% of the Latvian population is HIV positive with a sharp rise in cases of XDR tuberculosis.

At the bottom of this posting is the only information available about the cases of bTb in Germany this year.

From my point of view cattle are not the main problem in the development of tuberculosis.

But for reasons of political correctness they might make a nice scapegoat.

I have been asked to comment on the Governments proposal and on a proposal of the farmers union who want to avoid blanket testing at all costs.

They propose the testing of a percentage of randomly selected cattle.

To me this doesn't make sense as it seems that Tb occurs in clusters.

I think the fastest way to get an overview would be to test, within a certain timeframe, all cattle at slaughterhouses to get an overview of the regions where a problem might be lurking. One can then go into regions or individual herds. I think this is, at the earlier stages, much easier than to deal with all the farmers already up in arms because of BT and it would speed up detection because testing all the cattle in Germany can't be done within a week-

Here are the human cases :

**2002 : 7684 cases**

Germany has continued to be officially recognized as being free from bovine tuberculosis also in 2002. Information about the agents of cases of human tuberculosis is still scarce (Hartung,

2000,2001, 2002). Numbers of reports received from the Länder on examinations for mycobacteria performed in 2002 decreased for herds of cattle and swine. In contrast, more reports were received on examinations of individual animals (Table 59). There have been reports of single cases of disease involving *M. bovis* in cattle (including dairy cattle) and zoo animals (also cf. Tables 62 and 63). According to examinations of individual animals, the mycobacterium detected most frequently in chickens, swine and cattle was *M. avium*. Among cattle, *M. avium* accounts for a clearly lower absolute share. However, a lower number of differentiations was stated for cattle. In chickens, the absolute share of *M. avium* increased, while in swine, in contrast, it decreased as compared to the previous year. However, *M. avium* is the only mycobacterium detected in swine and chickens. In zoo animals, *M. africanum* was isolated.

#### 2003 : 7184 cases

According to the data recorded, 7184 human cases caused by agents of the Mycobacterium tuberculosis complex were established in Germany in 2003 with an incidence rate of new cases of 9.3 /100 000 population (2002: 8.7 /100 000 population). Characterization of 2911 strains revealed 2649 strains of *M. tuberculosis* (91 %), 37 strains of *M. bovis* (1.3 %), 6 of *M. africanum* and 1 of *M. microti*. In 2003, reports by the Länder on examinations for mycobacteria (Table 62) decreased in cattle and increased in swine. Examinations of individual animals were reported more frequently for cattle and sheep and less frequently, for chickens and swine.

The Länder reported single cases of disease involving *M. bovis* in cattle (3 positive herds and 4 samples from individual animals). According to examinations of individual animals, *M. avium* was the mycobacterium detected most frequently in chickens, swine and cattle also in 2003. *M. avium* is the only mycobacterium detected in swine, chickens and other birds. From pets and zoo animals, *M. africanum* and *M. microti* were isolated in addition.

#### 2004 : 6583 cases

*Demographic distribution* Amounting to 270 cases, the number of cases reported in children below 15 years of age slightly decreased compared with the previous year (287 cases).

The highest incidence was recorded in infants and young children aged below 5 years (4.1 cases per 100 000 population). Among these, particularly infants aged one and two years have to be mentioned (with incidences of 5.4 and 5.1, respectively). There were hardly any sex-specific differences to be established in the age groups of children. As in the previous years, there was a local peak of incidence seen in the age group between 25 and 29 years (11.0 cases per 100 000 population). A second peak of incidence, namely 14.1 cases per 100 000 population, was observed with increasing age among the age group above 70 years. The incidence in male adults was 11.1, i.e. 1.6 times higher than that in female adults (7.0). This sex-specific difference became manifest mainly above 25 years of age and became more pronounced with increasing age.

*Agents detected* Owing to an improvement of the software used for reporting, a differentiation of the different species within the *M. tuberculosis* complex could be performed for the first time in 2004. Corresponding data were available for 3 977 (60.4%) of the cases reported. Among these, *M. tuberculosis* was stated as the causative agent in 3 454 cases (86.8%), while the other species played a comparatively minor role only. Infection with *M. bovis* was stated in 51 cases (1.3%), *M. africanum* was listed in 13 (0.3%) cases and *M. microti* as well as *M. canetti* in one case each. In addition, the unspecific category of 'others' was stated in 48 cases (1.2%). In 409 cases (10.3%) the information reported was 'M. tuberculosis complex'.

*Clusters* For the year 2004, 88 clusters were reported so far referring to altogether 227 cases. 82 of these clusters referred to less than 5 cases. The number of clusters reported for 2003 had meanwhile increased from 104 (state as per 1st March 2004) to 123 clusters

#### 2005 : 6057 cases

*Chronological trends:* In 2005, 6,057 cases of tuberculosis were reported to RKI that complied with the case definition. This corresponds to an incidence of 7.3 cases per 100,000 inhabitants. Compared with the previous year (7.9; 6,549 reported cases) the incidence has fallen by 7.6 %. Thus, the decreasing trend observed in recent years continued in 2005 (see Fig. 6.50.1).

*Geographic distribution:* As in previous years, incidences considerably above the national average of 7.3 were observed mainly in Hamburg (10.8 cases/100,000 inhabitants), Berlin (9.8), Bremen (9.3) and Hesse (9.5). By contrast, the incidences in Schleswig-Holstein (4.3) and Saxony (5 .0) were comparatively low (see Fig. 6.50.2).

*Demographic distribution:* The number of reported cases of tuberculosis in children under the age of 15 (226) has continued to fall compared with the previous year (265 cases). As in recent years, the highest incidence was recorded in infants and young children under the age of 5 (3.4 cases/ 100,000

inhabitants). Attention should be drawn to children aged one and two (incidences of 4.7 and 3.3 respectively).

Scarcely any gender-specific differences were discernible in children with the exception of one-year-olds (see Fig. 6.50.3).

As in the previous years, there was an incidence peak in the age group of 25-29 year-olds (10.5 cases/100,000 inhabitants). With increasing age the incidence again climbed to 12.7 amongst the over 69-year-olds. The overall incidence for male patients was 9.1 and was, therefore, 1.6 times higher than for female patients (5.7). This gender-specific difference was revealed in particular by the high incidence of disease in men over the age of 30 and becomes even clearer with increasing age whereas at younger ages the incidence for women is almost the same as that for men (see Fig. 6.50.3).

*Clinical aspects:* With a share of 79 % (4,610 out of 5,869 cases for which corresponding data are available), tuberculosis mainly occurred as lung tuberculosis whereas 22 % (1,259 of the 5,869 cases) only manifested in extrapulmonary form. 72 % of the cases of lung tuberculosis were open (3,330 out of 4,610 cases). 32 % (1,484 out of 4,610) were the particularly infectious, microscopically positive form of lung tuberculosis. In 1,280 cases (28 %) a closed lung tuberculosis was diagnosed. 164 cases of death caused by tuberculosis were reported to RKI. This corresponds to a mortality of on average 0.2 deaths per 100,000 inhabitants. As is to be expected, this incidence increases with age. In the case of children under the age of 15, one fatal course of the disease was reported involving a child aged 1 ½ who died of tuberculous meningitis.

*Agents detected:* Differentiation of the various species within the *M. tuberculosis* complex was undertaken for a total of 3,458 (57 %) of the 6,057 reported cases. *M. tuberculosis* accounted for the main share (98 %; 3,385 cases) whereas the other species only played a subordinate role. Infection with *M. bovis* was indicated in 53 cases (2 %), *M. africanum* was indicated 17 (1 %) times. *M. microti* and *M. canetti* were indicated twice and once respectively. 374 cases mentioned "*M. tuberculosis* complex". In

addition, the non-specific category "Others" was indicated in 39 cases.

*Clusters:* For 2005 91 clusters have been reported so far involving a total of 220 cases. 87 of these clusters had less than 5 cases. 4 larger clusters involving 5 or more cases were reported. The number of clusters reported for 2004 has increased from initially 88 with a total of 227 cases (as per 1 March 2005) to 124 clusters with a total of 312 cases of disease.

2006 : 5402

*M. bovis* gehört zu dem *M. tuberculosis*-Komplex und wird in Deutschland nur selten als Infektionserreger der menschlichen Tuberkulose festgestellt (2006: 1,6% der festgestellten Erreger). Zu mehr als 96% der festgestellten Erreger wurde 2006 *M. tuberculosis* festgestellt, in wenigen Fällen wurde noch *M. africanum* und *M. microti* angegeben (RKI, 2007).

Deutschland ist seit zehn Jahren offiziell anerkannt frei von Rinder-Tuberkulose. 2006 wurden nur fünf Rindertuberkulose-Ausbrüche in Baden-Württemberg, Bayern und Thüringen angezeigt (FLI, 2007).

2007 : 4951

no additional information available yet

Cattle :

4.4.2008

Düsseldorf (aho) - In einem Milchviehbestand im Hochsauerlandkreis ist Tuberkulose festgestellt worden. Wie das Agrarministerium in Düsseldorf mitteilt, ist bei 44 der insgesamt 169 Rindern die Krankheit nachgewiesen worden. Der Betrieb wurde gesperrt, alle Tiere werden getötet und unschädlich beseitigt. Zurzeit ermitteln die Behörden, ob Tiere aus dem betroffenen Betrieb an andere Betriebe abgegeben wurden. Es handelt sich um den ersten Tuberkulosefall bei Rindern in Nordrhein-Westfalen seit zehn Jahren.

Wie jetzt bekannt wurde, hatte der Sauerländer Milchbauer im Jahr 2006 vier Tiere von einem Hof in Niedersachsen (Landkreis Stade) bekommen, auf dem nun die Rindertuberkulose entdeckt worden war. Dort mussten 170 Rinder getötet werden. Die niedersächsischen Behörden hatten daraufhin das Veterinäramt des Hochsauerlandkreises über den Verdachtsfall informiert.

Tuberkulose bei Rindern ist eine ansteckende Infektionskrankheit, die vor allem die Lunge, bei Kälbern auch den Rachen und den Darm befällt. Dort bilden sich Geschwulste. Die Tiere magern ab und geben weniger Milch. Die Tuberkulose beim Rind ist bei direktem Kontakt mit dem Tier auf den Menschen übertragbar. Die Gesundheitsbehörden vor Ort sind informiert, so das Ministerium.

*44 of 169 heads of cattle on a dairy farm in NorthRhine Westphalia tested positive for bTb. It was revealed that the farmer has bought 4 animals in 2006 from a farm in Lower Saxony where 170 heads of cattle had to be culled because of positive bTb tests. The authorities in Lower Saxony traced cattle movements and informed the veterinary services in NRW of the outbreak on the farm of origin.*

9.4.2008

Cuxhaven (aho) – Auch im Landkreis Cuxhaven wurde jetzt die Rindertuberkulose amtlich festgestellt. Betroffen sind nach einem Bericht der Cuxhavener Nachrichten je ein Betrieb in Wingst und in Cuxhaven. Beide Betriebe hatten Rinder von einem Wischhafener Hof bezogen, in dem die Krankheit zuerst festgestellt wurde.

Im Kreis Stade wurde die Tuberkulose auf zwei Betrieben bei einzelnen Tieren festgestellt. Auch diese Betriebe hatten nach Recherchen der Zeitung Rinder von dem Wischhafener Hof erhalten.

*bTb has been confirmed on two cattle farms in the Cuxhaven region (Lower Saxony). Initially an animal presented for slaughter from a farm in Wischhafen ( between Hamburg and Cuxhaven) showed signs of bTb infection after slaughter. After confirmation by the NRL the authorities began tracing cattle movements and animals on the 2 farms tested positive. All 3 holdings have been culled out*

*In addition, on two other holdings in Stade a single animal tested positive and had to be destroyed. All other animals on these holdings tested negative.*