SANCO/11672/2010

REPORT OF THE

"BOVINE TUBERCULOSIS"

SUB-GROUP TASK FORCE

Meeting held in **Idanha-a-Nova**

Portugal

26-27 April 2010

REPORT OF THE MEETING OF BOVINE TUBERCULOSIS SUB-GROUP
OF THE TASK FORCE FOR MONITORING ANIMAL DISEASE ERADICATION
HELD IN –IDANHA-A-NOVA, PORTUGAL, 26-27 APRIL 2010

Participants: see Annex I

Agenda: see Annex II.

Presentations

A number of presentations on the structure of the veterinary authorities, bovine population and tuberculosis (TB) control programme in Portugal were given. The presentations are available at the ministry webpage (http://www.dgv.min-agricultura.pt/) and only a brief summary is given here. The figures included are from the presentations, kindly provided by the respective speakers.

The Portuguese **CVO, Dr Susana Guedes Pombo**, outlined the structure and organisation of the Veterinary Services (DGV) in Portugal. The DGV is the national veterinary authority with the headquarters in Lisbon, 5 regional and 22 local divisions are placed in various parts of the country. An overview of the organisation is given in figure 1-2. In the area of each local division there are a different number of municipal veterinarian while private veterinarians perform field work on farms etc. Some 630 veterinarians are working with the TB control programme. The laboratories are part of the Ministry of Agriculture (i.e. not DGV) and private veterinarians with the OPPs (breeders' organisations) perform field duties within the programme, by delegation from the DGV. The programme is funded by EU and government money but also by the farmers. If the budgeted money is not sufficient for all actions included in the programme, the breeders jointly pay the remaining costs.
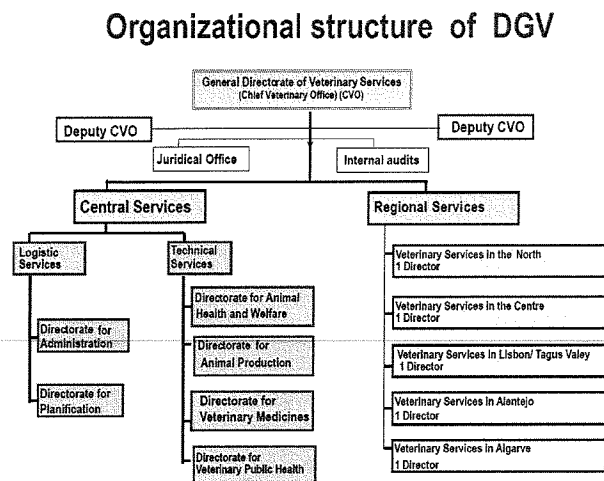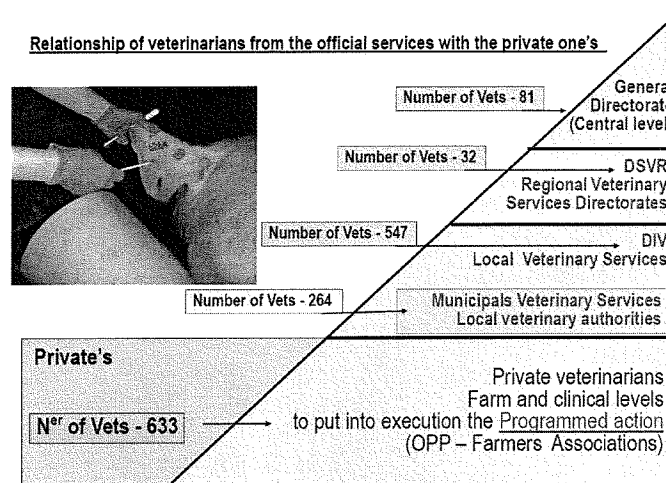
Figure 1.

Organizational structure of DGV

Figure 2.

Relationship of veterinarians from the official services with the private one's

Number of Vets - 81 → General Directorate (Central level)

Number of Vets - 32 → DSVR Regional Veterinary Services Directorates

Number of Vets - 547 → DIV Local Veterinary Services

Number of Vets - 264 → Municipals Veterinary Services Local veterinary authorities

Private's

Nº of Vets - 633 → to put into execution the Programmed action (OPP – Farmers Associations) / Private veterinarians Farm and clinical levels

The bovine population in Portugal was described by António Pina Fonseca. The total number of herds in 2009 was 37.584 and the total number of cattle was 1.060.831, giving a national average of 28 animals per herd. In the past decade, the number of farms has decreased to almost half the number, while the number of animals has only decreased slightly, i.e. farms are increasing in size.

In the Northwest part of the country, the farms are usually small dairy farms (in the "Bacia leiteira" region 25.000 dairy herds with 300.000 animals give an average herd size of 12 animals). In the South-Central part of the country larger beef herds dominate (in the Alentejo region 4.430 beef herds with 523.704 animals give an average herd size of 118 animals).

There are 22.700 cows of the raça brava (fighting bull breed). In these herds, only the cows are tested. The handling procedure for testing beef herds was described briefly. The cattle are herded into corrals for testing, which is a cumbersome procedure in some herds.

Dr. Sales Henriques described the National identification, registration and movement database for cattle (SNIRA). The database, governed by national legislation, was developed between 1999 and 2004. The access is restricted to veterinarians, authorities and farmers organisations but there is no open access. The main features are that all cattle are registered, with births, deaths, passports and movements recorded. Farmers, slaughterhouses and knackers report all events and relevant observations. There were discussions about the definitions of the terms holding and herd in the database. A holding may be a farm, market, fair or other facility where animals are kept (permanently or temporarily), while a herd is defined as a production nucleus. The keeper is the animal owner or trader. The system allows for different keepers in the same holding (e.g. a bull fighting arena) which is useful. There has been a revision and some restructuring of SNIRA after the inclusion of ovine animals. Vertical structures (e.g. area or species) allow for identification of different production types and activities within each holding. Sanitary measures, samples and classification (i.e. status) can be registered in SNIRA. Different epidemiological units may be defined for different diseases, based on data on movement, geographic location, production system etc. Backward and forward tracing of infected animals may be performed within the system (all contacts of an individual animal can be obtained for a defined time period).

Dr. Inês Cardoso presented the database on animal health, PISA. All relevant entities (organisations, authorities, laboratories etc) are connected to the database with different profiles, depending on their needs, on central, regional and local level. The OPPs, laboratories and veterinary authorities on all levels can all register information which allows for follow-up, analysis and control of all activities, including epidemiological analyses. Reports are produced regularly from the database, official reports as well as pre-formed or personalised analyses of the data. Full links between SNIRA and PISA are under development.

Dr António Pina Fonseca then highlighted the critical points of the TB control programme. The OPPs are responsible locally, for the execution of the activities. The system has worked well. In 2009, 76 infected farms were detected, the problems are mainly in the Central and Alentejo regions, where the largest farms are situated. There has been an apparent increase in the number of positive farms between 2008 (43 farms) and 2009 (76 farms). The yearly numbers of positive holdings and animals are given in figure 3.

Since the subgroup last visited Portugal in 2003, there has been a lot of efforts and activities: 1) training of veterinarians and practitioners via workshops, courses and conferences, creation of manuals for different aspects of TB control; 2) supervision of tuberculin testing by various visits, controls and follow-up activities, an upper limit of 7.500 normal heads (1 cow = 1 normal head and 1 sheep/goat = 0,14 normal head) per veterinarian, requirement for regular training, suspension of veterinarians that fail to comply; 3) epidemiological studies performed at the Veterinary Faculty in Lisbon to try to identify where the problems are; 4) training of slaughterhouse inspectors by workshops and practical exercises; 5) plans for surveillance of wildlife, definition of risk areas for TB transmission to and from wildlife; 6) control of animal movements.

Figure 3.
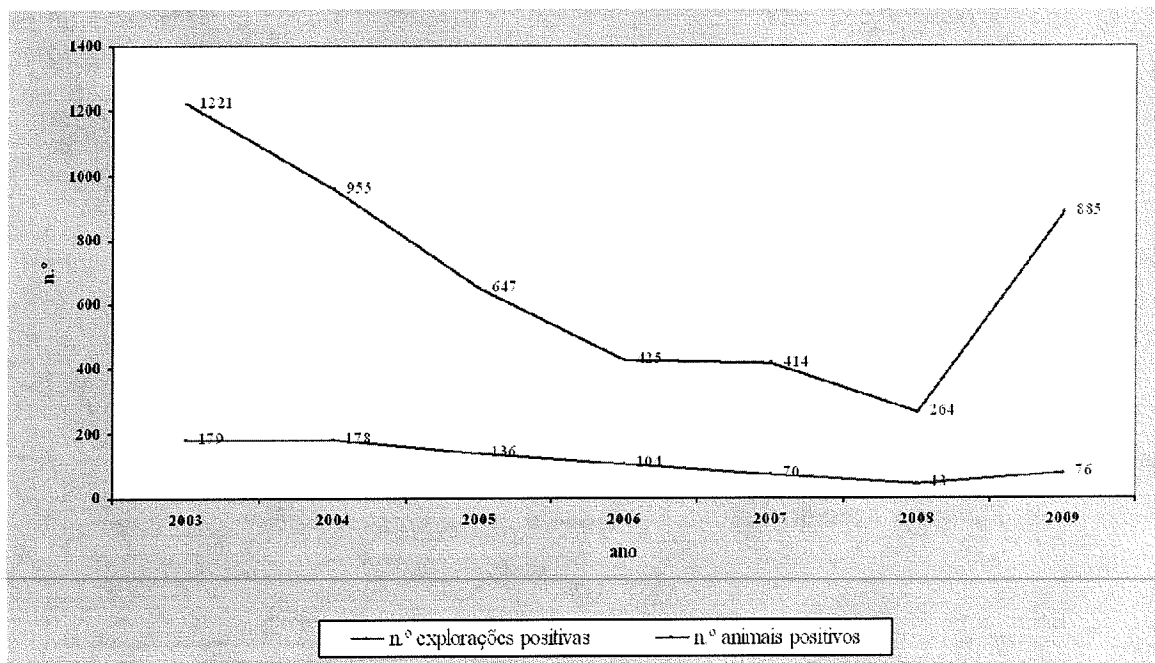
Efforts have been made to involve stakeholders. Moreover, the time allowed for actions on suspected TB cases has been shortened, the coordinating vet must design a control plan within 30 days of the slaughterhouse suspicion, which is followed up in the farm by the DGV.

4

The epidemiological studies have revealed that the majority of cattle with visible lesions detected post mortem come from regions where large farms dominate (Central and Alentejo regions). The epidemiological study was performed on 61 herds and the risk factors identified and the proportion of positive herds associated with each factor were: direct contact with infected herd (21%), contact with wildlife (30%), introduction of new animals (21%), failure to comply with pre-movement testing (5%), shared equipment with infected farm (7%), reoccurrence of infection (15%), other factors (39%). The problems in wildlife were mainly associated with deer and localised to the Idanha-a-Nova region.

The strategy for 2010 is based on rigorous tuberculin testing, continuous epidemiological studies, rigorous measures for tuberculin reactors and contact animals/herds, continuous training activities, enhanced supervisory procedures, enforced movement controls and continuing measures and studies as regards wildlife.

The National Reference Laboratory produced all tuberculin used in the programme until December 31st 2009, but since then an international company won the tender and now supplies all tuberculin. No additional potency testing of the tuberculin is performed.

Portugal is not an exporting country and therefore farmers don't feel any pressure to obtain TB free status, which is a problem, especially since the prevalence has dropped and many people believe TB to be a problem of the past.

Dr. Gabriela Fonseca described the testing and measures taken in infected herds and the surveillance programme. The primary test is the single intradermal comparative test. In the 1980's all cattle >6 weeks of age were tested twice a year but in recent years the testing interval as well as age limit have been based on the past 2 years' test results for different areas. In areas with <0.2% prevalence all animals >24 months of age are tested yearly, in areas with >0.2% ≤1% prevalence all animals >12 months of age are tested yearly and in areas with a prevalence >1% all animals >6 weeks of age are tested yearly. From 2010, the age limit for the areas with a prevalence >0.2% ≤1% has been lowered to 6 weeks to all females, young fattening males (separated in the herd) are excluded.

All officially TB free herds have status T3. If an animal in a T3 herd is suspected to have TB, the status is suspended to T3S. Relevant data are collected, tracing of animal movements performed and herd restrictions applied. Equipment is cleaned and disinfected, and all animals with a positive tuberculin reaction to the comparative test are slaughtered and sampled post mortem. At least 42 days after the slaughter of the last reactor, the herd is re-tested (all animals >6 weeks of age). If both histological and bacteriological investigations of rectors are negative and the herd test is negative, the T3 status is restored. If post mortem tests are positive the herd is classified as infected (T2.1). The first re-test of the herd is performed after 42 days and if all animals are negative, herd test with 60 days' interval is performed and one other after 6 months. If new reactors are found, the procedure is repeated. The γ-IF test is used as an ancillary test in some infected herds with many reactors, or where reactors are found repeatedly.

Dr. Ana Botelho gave an overview of the laboratory methods used and results obtained. Both liquid (Bactec 9000MB) and solid (Herrold's, Stonebrik's, LJ) media are used. In-house PCR methods that discriminate between the *Mycobacterium tuberculosis-* and *M. avium/intracellulare* complexes as well as other mycobacteria are used on culture material and all *M. bovis* strains are spoligotyped. The identification of all isolated strains between 2004 and 2010 are presented in figures 4-5. About half of all samples were culture negative. The majority of the isolates were *M. bovis* but *M. caprae* was also isolated form cattle. *M. bovis* was isolated from domestic pigs while *M. hominisuis* was isolated from wild boar. *M. bovis* has also been isolated form deer. Molecular typing of *M. bovis* and *M. caprae* is

performed to assess sources and transmission routes. There is a great diversity of spoligotypes (50 different patterns) but some are more common and have been found in most regions. Most types have been found in Alentejo which also has the highest number of isolates. In conclusion there is a large variety of spoligotypes and the diversity is even greater in some wildlife species. 8.4% of the infected herds have more than one spoligotype, sometimes several types are found in the same outbreak. Some types are shared by several animal species, some are common to cattle and wildlife. Further molecular typing has confirmed the great diversity of the Portuguese isolates and that introduction of infected animals was the cause of some outbreaks. Furthermore, reactivation may have occurred in 5 herds and there are indications of infection from deer and wild boar in some cases. Inclusion of results from suptyping in the PISA and SNIRA databases was suggested, to further strengthen epidemiological investigations.
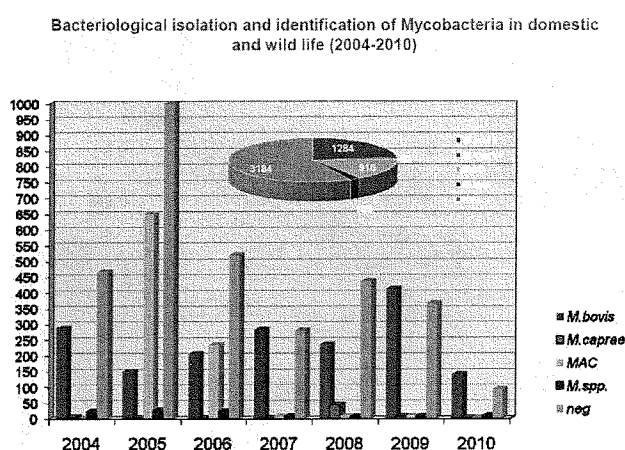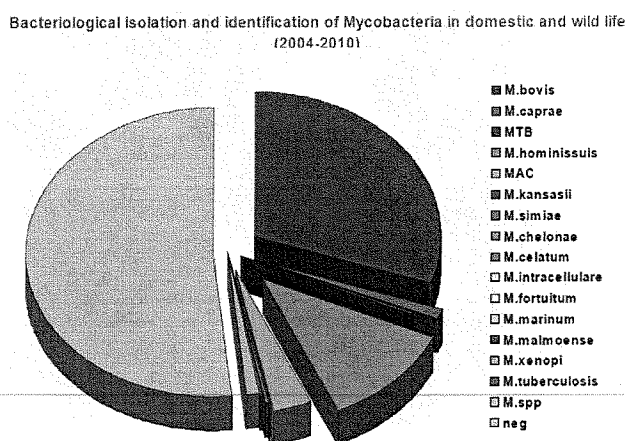
Figure 4.

Bacteriological isolation and identification of Mycobacteria in domestic and wild life (2004-2010)

Figure 5.

Bacteriological isolation and identification of Mycobacteria in domestic and wild life (2004-2010)

Dr. Miguel Lamela presented the role and implemented measures of the sanitary inspection services. The training of inspectors and continuous information and awareness activities were outlined. The slaughterhouse inspection was described as a systematic search for lesions, and sample-taking. Detailed investigations are required for detection of small lesions and routine may cause fatigue and lack in vigilance which is why regular training courses are conducted,

including efforts to strengthen motivation. The courses also serve as a meeting point for the trainees and more technicians as well as inspectors will be trained in the near future. Internet courses and new technology will be used where appropriate, to reach all areas in the country. A web page with legislation, check lists and newsletters has been set up but is not used as well as it could be. Inspection of slaughterhouses are conducted and promotion of coordination for better sharing of information.

TB is now the 4th most common cause for rejection of meat from cattle. From non-suspect animals only visible lesions are sampled while from suspect animals (reactors) a range of samples are taken according to specific instructions. Wildlife (game) is only inspected if put on the market. The initial inspection is not always performed by a veterinarian but the viscera have to be inspected by a veterinarian. It was emphasised that the initial inspection and the sanitary inspection are not equal.

Some 400.000 cattle are slaughtered every year. 0.079% (856 animals) were rejected due to TB lesions during the 3 years 2005-2007. Out of the 59 infected herds detected in 2009, 29 were detected by testing and 30 at slaughter. In 2009, 124 animals with suspect lesions detected at slaughter were confirmed as TB positive, 66 came from tuberculin test positive herds and 58 from herds where the last herd test was negative.

A presentation on human tuberculosis in Portugal was given by Dr. Miguel Resende. The incidence of human tuberculosis has decreased. All patients with pulmonary symptoms are tested and all positive cases are treated. To ensure compliance, patients have to visit medical centres for medication and if they don't show up legal enforcement is applied. There are more cases in men than in women, except for in one region. Most cases are pulmonary and this form is also most common in younger people while other forms are mainly seen in older patients. Epidemiological investigations are performed in each case and thoracic X-ray performed on all contacts. There is no formal link or information channel between veterinary and public health authorities. No human cases of *M. bovis* have been detected in Portugal. The presenter could not describe the culture methods used for human samples and thus this remains unclear, as does whether the culture methods employed are optimised to detect *M. bovis* infection.

Dr. Rita Amador described the collaboration between the Veterinary (DGV) and Forestry Services (AFN). Cervids are seen as the main risk factor. Deer numbers are increasing and there is overpopulation of deer in some areas where they eventually share water sources and pasture with cattle. Strategies for collaboration between all stakeholders involve communication of good practices and a document about this is under development, including sanitary practices for hunted animals and efforts to increase awareness among hunters. The Central region of the country along the Spanish border is considered the area with highest risk, with a high incidence of TB in cattle as well as wildlife. In this area, where hunting is a financially and socially important activity, post mortem inspection of game will be compulsory. Other recommended measures are to avoid co-habitation of domestic and wild animals and to increase testing frequency for cattle. Meetings will be held with Spanish colleagues to develop good strategies for wildlife that move between the two countries.

Dr. Maria do Carmo Caetano presented experiences from the Moura/Barrancos region. Deer are abundant in the region and in a limited area there is a specific breed of cattle, with 290 cows. There was no contact between the different farms in the region but deer moved freely and had indirect contact with the cattle, especially during the dry season. Several cases of TB occurred during some years and an eradication strategy was developed. Main points were hunting of deer, post mortem inspections and sampling of hunted deer, increased testing of cattle, follow-up and control of all tests, stakeholder involvement and collaboration. There

have been no TB cases since 2007 and the conclusions from this experience will be used when developing strategies for other areas.

Sofia Gonçalves described the deer population in Idanha-a-Nova. This is the second largest district in Portugal and hunting activities are frequent. There are hunting zones for organisations, municipalities and tourists. Deer are only abundant in some areas, where they are sometimes also present on farms. In other areas the numbers are so low that none are hunted. Most deer originate from Spain and the abundant zones are along the Spanish border. Deer are migratory and non-territorial. There is talk about overpopulation of deer in some areas but there are no valid population data. Reliable surveys are however planned. The numbers of hunted animals have been monitored over the years and these have increased. New legislation requires the publication of hunting dates and the reporting of number of hunted animals. Problems that were mentioned were the large area providing a good habitat for deer, there are many different management plans due to fragmented organisation and there is both a lack of data and a lack of collaboration between the different entities.

Dr. António Manteigas presented the TB situation in Idanha-a-Nova. In 2007 the number of positive herds was high, possibly associated with a very dry summer. So far there are 4 positive herds in 2010. The majority of the farms are located along the Spanish border and in the South of the district. TB positive hunted animals have been found in the same areas.

Dr. Pedro Hilário Cardoso described the role of the OPP veterinary coordinator. He works for the Ovibeira, an organisation with 1800 members that breed cattle, goats, sheep. They have 262 cattle farms, with some 16.000 animals. They have one coordinating veterinarian and 22 private field veterinarians. Each field vet is responsible for about 1600 cows. They have 8 infected (T2.1) farms and 11 farms with suspended status (T3S). All animals >6 weeks of age are tested twice yearly and all neighbouring farms are tested when there is a positive case. Training activities are conducted for both veterinarians and breeders and communication between different entities will make inspection schedules, audits etc more efficient. Problems that were mentioned were wildlife (difficulties with preventing contacts as many farmers need deer for their income), extensive production systems that make testing difficult (animals are stressed by handling) and breeders that are not so receptive to information. The importance of access to central databases, both for sharing and obtaining information, was emphasised.

In many of the discussions, members of the subgroup as well as the Commission representatives pointed out that the EU Directive only provides minimum requirements for TB control but if stricter measures are deemed necessary for eradication, they can be applied. Directive 64/432 is a trade directive and should not be seen as a guide to eradication, further measures are necessary for eradication.

Conclusions and Recommendations

The subgroup concluded that the situation as regards bovine tuberculosis in Portugal has improved immensely since the last visit in 2003. The creation of databases for animals, holdings and movements as well as for data about samples and tests is commendable. Moreover, activities in training and education as well as communication, collaboration and stakeholder involvement are excellent. There is also a clear intent to be vigilant about testing in risk areas and to attend to wildlife issues.

However, there are still some points where there is room for improvement and the group gave the following recommendations:

- As a lot of useful data are now available in the databases, more epidemiological analyses should be made continuously. This includes detailed investigations of

8

infected herds, risk factor analyses as well as testing history of the herds and all animals within them. It is important to compile and summarise available data to allow for regular follow-up of the progress of the eradication programme. Data on exact test results (number of inconclusive reactors at each test as well as positive and negative results) and data on cases detected at slaughter may indicate whether it is appropriate to use stricter test interpretation, single testing or more rigorous eradication measures in some cases. Moreover, detailed information about infected herds may indicate major sources of new infections and thus provide a means to prevent these.

- Epidemiological indicators are important also for follow-up of slaughterhouse inspections. The submission rate (i.e. number of lesions submitted vs. number of animals slaughtered) appears to be lower than the expected rate of visible lesions. Even in the absence of tuberculosis, a higher number of visible lesions are to be expected due to e.g. parasitic infections and other bacterial infections. More importantly, the proportion of submitted lesions where tuberculosis is detected is higher than would be expected at this final stage of eradication. It is particularly important to investigate the cases that are detected at slaughter from animals and herds where testing has not indicated any infection, in order to establish the proportion of herds where further TB cases were revealed. Details on testing history and risk factors in such herds must be analysed.

- The communication between the national laboratory and the veterinary services as well as field staff and other laboratories should be improved. Formal communication channels must be present and background information about samples and test results continuously exchanged between all relevant parties, so that prompt measures can be taken and further investigations in the field as well as in the laboratory be initiated without delay. In addition to formal communication, personal contacts and collaboration are also needed and it is to be expected that these would naturally enhance the formal information exchange, when established and applied. A better link between field epidemiology and molecular epidemiology is expected to give all organisations involved a better overview of the situation. A connection between the different diagnostic procedures: field tests, lesions at abattoirs, histopathology, isolation of the agent, identification and typing is essential. This will allow for the detection of any loss of sensitivity in some tests and would give clues to improve the overall procedure. All parties involved should have access to the PISA database, to facilitate the communication and connection between different authorities and organisations.

- As regards wildlife, the efforts to highlight these issues are encouraged but should be complemented with proposed actions to prevent contact between wildlife and cattle. The infection transmits in both direction and to break this cycle it is necessary to separate water and feed for the different species. If farmers don't want to exclude wildlife from feed and water sources, fencing might be used to keep wildlife in separate areas where feed and water is made available, but separate from the cattle. Failure to prevent species interaction and disease transmission in localised areas may facilitate transmission of infection out of the area by bovine movements to other parts of Portugal where TB freedom would otherwise be maintained.

- The absence of human cases should be verified by checking that the culture methods used for primary isolation from human samples are optimal also for *Mycobacterium bovis*. Many methods used routinely for *M. tuberculosis* will not detect *M. bovis* and thus human cases of *M. bovis* may be missed. In this late stage of eradication such cases may indicate (or even constitute) remaining sources of infection and interfere

with the success of the eradication. Moreover, it is important to establish a formal channel of information between the veterinary authorities and the authorities responsible for public health. This would be beneficial for surveillance and control of all zoonotic diseases.

- Analyses of detailed information about test results are especially important with the recent change of tuberculin source. The exact composition and potency of the tuberculin is well known to affect the test results and tuberculins from different sources are expected to perform somewhat differently. To know whether the apparent rise in prevalence of tuberculin reactors is due to the change of tuberculin or a real increase in the rate of infection is crucial for the future eradication strategies. If it cannot be attributed to the change in tuberculin, it may in fact indicate a greater problem that could hamper the future TB eradication in Portugal. The high number of infected herds detected at slaughter and not by testing is in itself a cause for evaluation of the tuberculin and the testing procedure.

Finally

The members of the subgroup would like to thank the Portuguese hosts for all their work with the meeting, the presentations and the warm welcome in such a nice venue, and wish them the best of success in their eradication programme.

Annex I

Participants:

<u>**Subgroup members:**</u>

Dr Susanna Sternberg Lewerin (Chairwoman), National Veterinary Institute, SE (Chair)

Dr Margaret Good, Dept. of Agriculture, Food & Rural Development, Dublin, IE

Dr Fulgencio Garrido Abellán, General Subdirection of Animal Health, M.A.R.M, ES

Dr Giorgio Zanardi, Istituto Zooprofilattico Sperimentale Lombardia e Emilia, Brescia, IT

Dr Maria Pacciarini, Istituto Zooprofilattico Sperimentale Lombardia e Emilia, Brescia, IT

Dr. Alicia Aranaz, TB CRL Madrid, ES

<u>**EU Commission (DG SANCO-Unit 04- Veterinary control programmes):**</u>

Dr. Valentina Piazza

Dr. James Moynagh

<u>**Hosts**</u>

Dr.ª Susana Guedes Pombo, Chief Veterinary Officer (CVO)

Dr. António Pina Fonseca, Directorate for Animal Health and Welfare (DSSPA)

Dr. Sales Henrique, Directorate for Animal Production (DSPA)

Drª. Inês Cardoso, Veterinary Services in Lisbon /Tagus Valey (DSVRLVT)

Drª Gabriela Fonseca, National Coordination of the Eradication Programme from Centre Services (DGV)

Dr.ª Ana Botelho, National Veterinary Laboratory of Reference (INRB/LNIV)

Dr. Miguel Lamela, Directorate for Veterinary Public Health Services (DSHPV)

Dr. Miguel Resende, Delegate from Directorate Health Services

Dr.ª Rita Amador, Chief of Division Animal Health and Policy of Directorate for Animal Health and Welfare (DPPS/DSSPA)

Dr.ª Maria do Carmo Caetano, Director of Veterinary Services in Alentejo (DSVRALT)

Eng. Sofia Gonçalves, Eng. National Forest Authority (AFN)

Dr. António José Manteigas, Chief of Local Division of vet Castelo Branco (DIVCB)

Dr. Pedro Hilário Cardoso, Coordinator vet from OPP OVIBEIRA

ANNEX II

AGENDA

REUNIÃO DO SUBGRUPO DA TASK-FORCE
SOBRE TUBERCULOSE BOVINA
Agenda

MEETING OF THE SUBGROUP FOR BOVINE TUBERCULOSIS
Agenda

26 e 27 de Abril de 2010
Idanha-a-Nova
Portugal

26 de Abril de 2010

FORUM Cultural, Rua de S. Pedro - Idanha-a-Nova

14:30 horas	– Boas-vindas e introdução – Dr.ª Susana Guedes Pombo, Directora Geral de Veterinária Welcome and introduction – Dr.ª Susana Guedes Pombo, Chief Veterinary Officer (CVO)
14:45 horas	– Apresentação do subgrupo da Task-Force da tuberculose bovina e introdução –Dr. James Moynagh, Dr.Valentina Piazza, Comissão Europeia Presentation of the subgroup on bovine tuberculosis Task-Force and introduction – Dr. James Moynagh, Dr. Valentina Piazza, European Commission
15:00 horas	– Estrutura e organização dos Serviços Veterinários – Dr.ª Susana Guedes Pombo, Directora Geral de Veterinária Structure and organization of the Veterinary Services – Dr.ª Susana Guedes Pombo, Chief Veterinary Officer (CVO)
15:15 horas	– Caracterização da população bovina – António Pina Fonseca, DSSPA Bovine population characterization – António Pina Fonseca, Directorate for Animal Health and Welfare (DSSPA)
15:30 horas	– Sistema Nacional de Identificação, Registo e Circulação de bovinos – Dr. Sales Henrique, DSPA National bovine Identification, Registration and Movement system – Dr. Sales Henriques, Directorate for Animal Production (DSPA)
15:45 horas	– Programa Informático de Saúde Animal – Drª. Inês Cardoso, DSVRLVT Database on National Animal Health System – Drª. Inês Cardoso, vet from Veterinary Services in Lisbon /Tagus Valey (DSVRLVT)
16:00 horas	– Intervalo para café Coffee break

16:15 horas	– Programa de erradicação da tuberculose bovina: dados e pontos críticos – António Pina Fonseca, DSSPA Bovine tuberculosis eradication programme: data and critical points – António Pina Fonseca, Directorate for Animal Health and Welfare (DSSPA)
16:30 horas	– Programa de erradicação da tuberculose bovina: programa de vigilância e medidas em explorações infectadas – Drª Gabriela Fonseca, Coordenação Nacional do Programa de Erradicação Bovine tuberculosis eradication programme: Surveillance programme and measures applied on infected herds – Drª Gabriela Fonseca, National Coordination of the Eradication Programme from Centre Services/DGV
17:00 horas	– O diagnóstico laboratorial da tuberculose em bovinos e fauna selvagem – Dr.ª Ana Botelho, INRB/LNIV Laboratory diagnosis of tuberculosis in bovine and wildlife – Dr.ª Ana Botelho, National Veterinary Laboratory of Reference (INRB/LNIV)
17:30 horas	– O papel da Inspecção Sanitária no programa de erradicação: medidas implementadas – Dr. Miguel Lamela, DSHPV The role of the sanitary inspection in the eradication programme: implemented measures – Dr. Miguel Lamela, vet from Directorate for Veterinary Public Health Services (DSHPV)
18:00 horas	– Debate Discussion
20:00 horas	– Jantar Dinner

27 de Abril de 2010

09:00 horas	– Tuberculose em humanos: estatística, diagnóstico e controlo – Dr. Miguel Resende, Delegação de Saúde Tuberculosis in humans: statistics, diagnostic and control – Dr. Miguel Resende, Delegate from Directorate Health Services
09:15 horas	– Articulação entre os Serviços Veterinários e os Serviços Florestais – Dr.ª Rota Amador, DPPS Articulation of Veterinary Services and Forestry Services – Dr.ª Rita Amador, Chief of Division Animal Health and Policy of Directorate for Animal Health and Welfare (DPPS/DSSPA)
09:30 horas	– Experiência do controlo da tuberculose bovina na região de Moura/ Barrancos – Dr.ª Maria do Carmo Caetano, DSVRALT Control Experience regarding bovine tuberculosis at Moura/ Barrancos region – Dr.ª Maria do Carmo Caetano, Director of Veterinary Services in Alentejo (DSVRALT)
09:45 horas	– População de veados na região de Idanha-a-Nova e caracterização dos sistemas de produção – Eng. Sofia Gonçalves, Eng. From National Forest Authority (AFN) Dear population and characterization of the production systems in Idanha-a-Nova region –Eng. Sofia Gonçalves, Eng. From National Forest Authority (AFN)
10:00 horas	– Caracterização da tuberculose bovina na região de Idanha-a-Nova – Dr. António José manteigas, DIVCB Characterization of bovine tuberculosis and deer population in the region of Idanha-a-Nova – Dr. António José Manteigas, Chief of Local Division of vet Castelo Branco (DIVCB)
10:15 horas	– O papel do Médico Veterinário Coordenador da OPP – Dr. Pedro Hilário Cardoso, MVC OPP OVIBEIRA The role of the OPP Veterinarian Coordinator – Dr. Pedro Hilário Cardoso, Coordinator vet from OPP OVIBEIRA
10:30 horas	– Debate Discussion
11:30 horas	– Reunião do subgrupo Meeting of the subgroup
12:00 horas	– Conclusões finais e recomendações Final conclusions and recommendations Encerramento Closure
13:00 horas	- Almoço Lunch