EUROPEAN COMMISSION
HEALTH & CONSUMERS DIRECTORATE-GENERAL

Veterinary and international affaires

Unit G5 - Veterinary programmes

SANCO/12340/2011

REPORT OF THE

"BOVINE TUBERCULOSIS"

SUB-GROUP TASK FORCE

Meeting held in **Zagreb**

Croatia

7-8th July 2011

REPORT OF THE MEETING OF BOVINE TUBERCULOSIS SUB-GROUP OF THE TASK FORCE FOR MONITORING ANIMAL DISEASE ERADICATION HELD IN ZAGREB, CROATIA, 7-8TH JULY 2011

Participants: see Annex I

Agenda: see Annex II.

Objectives of the EU-Task Force BTB in Croatia:

This is the first time that the BTB task force is organised in a non-EU MS.

The meeting took place in the Veterinary Directorate in Zagreb, Croatia and was held at the request of the Croatian veterinary authorities. The objectives were:

- to get advice on how to improve the effectiveness of the TB control programme in place;
- to prepare for a potential future application for co-funding after becoming an EU Member State.

Various presentations were given on the veterinary authorities and veterinary system the animal identification system, other organisations involved as well as the results and activities of the bovine tuberculosis (TB) eradication programme. As Croatia is soon to become a member of the European Union, adaptation of national legislation to implement EU law has already been performed and the legal framework for the control of bovine tuberculosis is in line with relevant EU legislation.
A summary of the presentations is given in this report, along with some recommendations given by the TB subgroup of the EU Task force on animal disease control programmes.

Presentations

The meeting was opened and the group was welcomed by the Croatian CVO, Dr Sanja Separovic.

The first presentation focused on the veterinary system.
There are two veterinary authorities under the Ministry of Agriculture, Fisheries and Rural Development; the Veterinary Directorate and the Veterinary Inspection Directorate. The Veterinary Inspection Directorate is represented on the regional level by County Veterinary Offices and reports back to the Veterinary Directorate on their activities. In the field, tasks such as tuberculin testing are performed by private veterinary organisations that are authorised by the Veterinary Directorate, Authorised Veterinary Organisations (AVOs). Both the organisation, as well as the individual veterinarians, have to be authorised to perform the various tasks within the programme. The Croatian Veterinary Institute is responsible for expert advice and laboratory services. Other bodies within the veterinary system are the Veterinary Faculty and the Veterinary Chamber.

Within the Veterinary Directorate there are two main departments responsible for animal health and veterinary public health, respectively. The animal health department further includes a section on epidemiology, a section for veterinary services and I&R, and a section for animal welfare. The veterinary public health department contains a section responsible for hygiene of food of animal origin and a section for veterinary medicine and feed.
There are a total of 143 authorised veterinary organisations in the country, with 903 authorised veterinarians.

The second presentation described the animal identification system.
The mandatory identification and registration of animals is governed by one ordinance on bovine, one on porcine and one on caprine animals, all under the Veterinary Act from 2007. The animal keepers are responsible for having their animals identified and registered and for notification of any movements from or to their herds, which is then entered on the database by the AVO responsible for the herd. The Veterinary Directorate is the competent authority for the animal register that is managed by the Croatian Agriculture agency (CAA), under contract. The CAA monitors data entry, distribute ear tags and registration forms to farmers etc. All animals obtain an 10-digit number preceded by the country code (HR) and the register contains information such as the address and coordinates of the holding, the keeper and the owner of the animal. There is also information about each holding's production type, veterinarian, number of animals kept there and the maximum holding capacity. The CAA has 27 branches with 231 assistants employed.
Annual veterinary checks have been conducted on all farms (as regulated by the ordinance on veterinary checks of live animals for internal trade and animal health certification) by authorised veterinary organisations, with the purpose to educate farmers and facilitate registration, to update and "clean up" the database. These activities have continued for some years and the number of irregularities as regards registered data has decreased significantly.
There used to be a high number of farms with only 1 or 2 cows. These are disappearing and at the moment about 21% of herds contain 1 cattle, 16 % of herds contain 2 cattle, 11% of the herds contain 3 cattle, 29% of herds contain 4 to 10 cattle, 12 % of herds contain 11 to 20 cattle, 8% of herds contain 21 to 50 cattle, 2% of herds contain 51 to 100 cattle and 1% of herds contain more than 100 cattle.There are some 513 000 cattle in the country, kept on a little more than 42 000 holdings, and the herd sizes are steadily increasing.

Next, the history of TB eradication in Croatia was described. In 1896, checks were performed in slaughtered animals. In 1910 testing revealed about 60% positive animals in some herds.. The planned control began in 1946, when some 30% of the herds were positive. There was a decrease in herd prevalence during the following decade to around 1.4% in 1953. In 2004, annual testing of all cattle >6 months of age began and in 2006 the age limit was lowered to 6 weeks. The designation of officially free (OTF) herds was initiated in 2010, and all positive animals were immediately slaughtered without re-testing.
So far in 2011, bacteriological investigation has been performed on samples from 276 cattle in 126 herds in 14 counties. Of these, 23 (from 10 herds and 6 counties) have yielded positive cultures: 13 *M. caprae* (from 5 herds), 6 *M. bovis* (from 1 herd) and 4 other mycobacterial species from 4 herds. 97 animals from 56 herds gave negative results whereas 133 samples are still being analysed. The animal prevalence is estimated to be below 0.1 % and the herd prevalence is below 0.5%.

A discussion followed the presentations, where some issues were highlighted.

The single tuberculin test is used as the primary test, but inconclusive reactors (more than 2 and less than 4mm) are re-tested with the comparative test. The lower sensitivity of the comparative test was discussed.
It was also pointed out that the quality of the data in the registers was essential for the implementation of EU legislation.
Most herds use artificial insemination, excepting a few who have a licensed bull for their own cows.
For disease control purposes, all animals on the same holding are regarded as belonging to the same unit, regardless of whether they have different owners.
There are many herds that use common pasture, but very few herds have secondary premises and where they do exist they are usually very close.
In infected herds, other animal species are also subjected to testing.

The next presentation was on the legislative framework.
Essential legislation includes the Veterinary Act, the Ordinance on notification of animal diseases, the Ordinance on animal health requirements applicable to trade in cattle and swine, the Ordinance on measures for control and eradication of bovine tuberculosis. There are also yearly issues of Orders and Instructions.
The case definition for TB includes either a positive reaction to bovine tuberculin, isolation of bacteria from the *M. tuberculosis*-complex from the animal, or typical post-mortem lesions in combination with positive bacteriological culture (at necropsy or slaughter). The test interpretations used are 2 mm as an upper limit for negative reactions in the single test, more than 2 and less than 4 mm is defined as an inconclusive reaction and >4 mm (or clinical signs) as a positive reaction. For the comparative test, a negative result includes any bovine reaction less or equal to the avian reaction, inconclusive is defined as a bovine reaction 1-4 mm greater than the avian reaction and positive is a bovine reaction >4 mm greater than the avian reaction, or clinical signs i.e. as per Directive 64/432/EEC. All animals which are not negative in the comparative test are treated as positive.

All positive animals must be slaughtered and sampled in the slaughterhouse. Inconclusive reactors are re-tested after a minimum of 42 days. It is legally possible to slaughter animals where there is a strong suspicion of TB, without them fulfilling the criteria in the case definition. This is up to the responsible Veterinary Inspector to decide. In some herds inconclusive reactors, or all animals in the herd, have been slaughtered due to the particular circumstances.
A short discussion followed on how to make slaughterhouses more willing to accept slaughtering reactor animals and what incentives may be useful. This is a problem, especially when there are not so many reactor animals and the slaughtering companies don't depend on them to obtain enough animals for slaughter.
Officially TB free herds are given status T3. All herds have to perform pre-movement tests (within 30 days), except on animas going directly to slaughter. T3 herds are tested annually and may only buy animals from other T3 herds. The veterinary organisations receive lists of all farms within their area that are to be tested. They have an incentive to remind the animal keepers to get the testing done, as they get paid for it. If a farm fails to test yearly, the status is withdrawn (but this has so far not been an issue). The status is also withdrawn in case of a confirmed case or an illegal introduction of animals. The status is suspended in case of a tuberculin reaction.

The following presentation described the TB eradication programme in 2010-2011. Since October 2009, test results could be entered in the database. In 2010, two tuberculin tests, paid

for by the state, were to be performed in all herds. Animal keepers pay for pre-movement tests. By the end of 2010, almost all aspects of the programme were implemented and some 15 000 herds had obtained T3 status. 2011 was the planned 2nd year of the initial phase of the programme. By now (July 2011), 65% of the herds have T3 status.
In 2010, there were 845 inconclusive reactors of which 93 were also positive on the comparative test. A total of 308 positive animals in 124 herds were detected.
Since 2011, fattening herds are also included in the programme. These herds import a lot of cattle. Soon all old data will be available in the TB application of the database and also a link to the lab results in the Veterinary Institute so that they will be available directly in the TB application. This application was also demonstrated and used as a basis for discussions and explanations on actions taken in different situations. The follow-up of positive animals and herds, tracing of contact herds and testing history of herds was also shown.
Paratuberculosis (Johne's diseases) is present in the country, at an unknown prevalence. It was discussed how this may affect the sensitivity of the comparative test, which is expected to be much lower in herds co-infected with paratuberculosis.
Samples from positive or suspect cases are only cultured, no histologic examinations are performed. Information of lab results is sent to all relevant authorities as well as the responsible veterinary organisation, who then informs the farmer.

The next presentation was given by the representatives from public health (epidemiologist and MD Borislav Aleraj and Dr Vera Katalinić-Janković, who is responsible for the reference laboratory).
M. tuberculosis is the dominant cause of human tuberculosis, *M. bovis* is very rare. Other mycobacteria are also hardly ever found in human samples. There was a high incidence and prevalence of human tuberculosis after the 2nd World War. Since then, general BCG vaccination and systematic treatment of positive cases have contributed to a continuous decrease in both prevalence and incidence. Now the number of yearly cases amount to about 17/10 000 inhabitants. Critical points that have been identified for the control include good reporting systems, vaccination, improved standard of living, health education, accessibility and quality of treatment.
There are specialised MD's who with their teams perform epidemiological tasks in prevention, control, supervision and education. There is approximately one such team per 40 000 inhabitants, they perform tasks as regards other diseases as well. The medical epidemiology work is performed on national, regional and field level. The BCG vaccination coverage has been >95% since 2000, the past few years it has exceeded 99%. There are only a few cases of tuberculosis meningitis in children and most tuberculosis cases are elderly people. The yearly cases of *M. bovis* are 0-1 and important factors for this are the control in cattle, pasteurisation of milk and the successful collaboration between veterinary authorities and public health authorities.
There have been cases of *M. tuberculosis* in cattle, but the risk of this has decreased due to successful treatment regimes and a low prevalence in humans. The situation as regards antibiotic resistance in *M. tuberculosis* is very favourable in Croatia. There are routines and instruction for health care workers on how to reduce the risks of becoming infected. The risk is much higher from human cases than from animals. Regulations on monitoring, reporting and control of human tuberculosis apply to all mycobacteria within the *M. tuberculosis*-complex.
>75% of the human cases are confirmed bacteriologically. There are 14 laboratories in the Croatian National Tuberculosis Laboratory Network. The National reference laboratory performs genotyping, bacterial identification, proficiency testing and holds a genotype database. Liquid culture media are used as well as molecular methods. A multiplex PCR for

the *M. tuberculosis*-complex is used. There is an increasing number of isolates not from the *M. tuberculosis*-complex. There has been 2 *M. bovis* cases in the last decade, one in 2004 and one in 2007.
There is close collaboration and communication between the veterinary authorities and the public health authorities.

Next, the laboratory investigations made by the Croatian Veterinary Institute were outlined. The laboratory for bacterial zoonoses and molecular diagnostics of bacterial diseases is certified according to ISO HR EN 17025. They use solid media for isolation of mycobacteria and genotyping is mainly done by MIRU-VNTR. TB (caused by mycobacteria from the *M. tuberculosis*-complex) is notifiable in all animal species. In addition to the cases from livestock, there was a case of *M. tuberculosis* in a dog some years back and in one cow in 2010. Active surveillance only includes cattle, but all livestock are inspected at slaughter. There are some farms with milking goats.
If there is growth on solid media, colony material is examined by microscopy and all suspect material is further analysed with a kit for molecular identification of the *M. tuberculosis*-complex. Other molecular methods may also be used, if relevant. The laboratory participates in proficiency testing via ring trials set up by the Croatian National institute for Public Health in Zagreb, the Veterinary Faculty in Ljubljana, and the EU reference laboratory in Madrid.
Most samples are from tuberculin reactors. The slaughterhouse submission rate from non-reactor herds is close to zero.
The quality testing of tuberculin is done for each batch. Both bovine and avian tuberculin is imported from the Czech Republic. Quality testing is performed according to international manuals, lab analyses as well as guinea pig tests. Standards are purchased from UK. Only batches that pass the test and get a certificate from the Veterinary Institute may be used. Tuberculin may only be used for official testing by authorised veterinarians.

A presentation of the work of the field veterinary inspectors re-emphasised the usefulness of the database, where the inspectors may use their own database application to fulfil the requirements for regular controls of compliance with all decisions etc. in their area of responsibility. The authorised veterinarians may also see their own display in the database (restricted to their own area of responsibility), and access all official forms needed for various diseases. The veterinary inspectors can see data on all holdings, to gain insight in the status of holdings and check contacts, compliance with movement restrictions etc. State veterinary inspectors are however the only ones who can change and assign the status of any holding.
The annual plan includes inspections of the work of the veterinary organisations. These checks are mostly limited to documents and there appears to be few inspections of the technical performance in the field.

Finally, an overview of the epidemiological investigations was given. The density of cattle herds varies throughout the country. The densely populated areas are mainly in the north, and this is also where the fattening herds are located. The geographical distribution of positive herds almost matches the herd distribution and the bacteriologically confirmed herds are located in the areas with the most cattle. *M. caprae* is isolated nearly as frequently as *M. bovis*.
Epidemiological investigations in positive herds include tracing of all epidemiologically linked herds and testing them. Moreover, a questionnaire has been used in positive herds this year. The results of this study will be thoroughly analysed by the end of 2011. The questions included in the study covered the relevant aspects for gaining insight into risk factors and analyse the performance of the surveillance system. A case-control study will also be

performed on all positive herds. So far, the questionnaire results for 49 positive holdings in 3 counties are available. The prevalences in these counties are different but the trends fluctuate over time. Most herds were found positive in the annual test and most were extensive dairy herds. The herd sizes varied and no clear pattern could be seen. Most herds reported little trade and there were rarely recently introduced animals in the herds before the positive case was identified. About half of the herds reported attending markets ≥1/year. Nine of the 49 herds had a previous positive case in the past 2 years and 19 of the 49 herds had had an unconfirmed suspicion. Most of the herds were tested twice the previous year. Five of the 49 herds fed their calves with milk from another herd. Most herds had other infected in their near vicinity. The likely source of the infection could not be identified in 29 of the 49 herds. In 4 herds it was concluded to be via a newly introduced animal and in 12 herds from a common pasture. In the remaining herds, neighbouring herds and other sources were most likely.
Challenges that are currently discussed are: frequency of testing, testing scheme and test interpretation, common pastures, and possible wildlife sources. It has not yet been decided whether to handle all herds using a common pasture as one unit (as regards restrictions etc.) but they are always included in the epidemiological investigations if one herd becomes positive. All herds are tested before going to a common pasture but currently not when they go back to their farms again. This is however being discussed. Wildlife monitoring is currently not conducted but has also been discussed. Active disease surveillance in wildlife in place is for classical swine fever, African swine fewer, and Aujeszky disease in wild boar.
A case was presented that had turned out to be particularly challenging. It was a dairy farm with 218 cattle that on testing in 2010 suddenly showed a large number of severe reactions to the bovine tuberculin. The herd had been tested previously without reactors and it was a very well managed, high-producing herd. The dairy cows originated from Germany and had been tested on import. Since then the herd had been closed and no animals had been introduced. The dairy cows were mainly kept indoors in a new barn. Heifers on pasture were negative. There were also pigs, poultry, cats and dogs on the farm. No other susceptible species, including humans, was positive. On slaughter, a total of 87 animals had visible lesions and *M. caprae* was isolated. Many possible sources of introduction were investigated. It could not be ruled out that there was a wildlife source. However, later it was discovered that the cows may have been fed colostrum from another farm when they were calves (although this could not be confirmed). This other farm had also been positive in 2004 and the same genotype of *M. caprae* (never seen anywhere else in the country) was isolated. This case was discovered when a young boy on he farm was infected, most likely from raw milk, indicating active shedding of the bacteria in the raw milk at the time.
All animals on the infected farm detected in 2010 were slaughtered and no further spread could be detected in the tracing of the infection.
The following discussion concluded that t was most likely that the infection was introduced via the raw milk infecting one or more of the cows when they were young calves. A recrudescence of this latent infection may then have occurred during a difficult calving or some other stressful event causing open infection in the lungs with aerogenous shedding of large numbers of bacteria, causing the apparently explosive outbreak in the animals on the farm. This case demonstrated both the challenges met in the eradication from individual herds and the diligence employed by the Croatian authorities in investigating TB cases.

Summary and recommendations

The TB group was impressed by the hard work undertaken by the Croatian veterinary authorities and the good results achieved so far. In particular, the thorough work with the

databases was praised, as this is recognised to be a prerequisite for a good quality control and eradication programme. The surveillance programme is very well designed and the use of the single tuberculin test as a primary test, along with severe interpretation of the test results whenever relevant, provides for a good overall sensitivity of the system. The case definition is also very well chosen at this stage, as it ensures thorough investigation of all suspicions and projects confidence in the tuberculin test. Moreover, the good collaboration with the public health authorities is impressive and presents a good example for other countries to follow. The epidemiological work is also commendable, although still in the early stages.
Below are listed some recommendations that the group has compiled that may be useful for further improvements to the programme.

1. **Test type, testing interval and test interpretation**

As the comparative test is less sensitive and when used for follow-up testing of an inconclusive reactor becomes even less sensitive (serial interpretation), it is recommended to use only the single test in herds where the infection has at some time been bacteriologically confirmed. Moreover, no inconclusive reactors should be left in these herds. Instead, all animals not testing negative should be treated as positive.

Otherwise, the strategy used so far has worked well in this initial stage of the programme and should be followed until the initial phase has been completed. However, as the programme moves into the following phase it is recommended that some changes be made.
The comparative test can be used either as a primary test or as a follow-up test for positive single test responders in areas where there has never been a bacteriologically confirmed positive herd. This will increase the specificity of the test in these areas and, as there have been no confirmed cases, there is a high probability that the reactions seen have been non-specific and not caused by bacteria in the *M. tuberculosis*-complex. Thus, the reduced sensitivity is not a problem in these areas. Testing once a year will be enough in these areas, saving resources for areas where the infection may still be circulating.
In areas with confirmed positive cases, testing twice a year with the single test is recommended. Moreover, the test then should be interpreted so that both inconclusive and positive reactions are regarded as positive.
In the future, if the above suggestions give the expected results, as prevalence and incidence come close to zero a change of the case definition as well as the testing strategy may be required.

2. **Slaughterhouse surveillance**

The slaughterhouse submission rate is too low. Even in the absence of tuberculosis, some granulomas of different aetiology would be expected in a certain number of animals. In animal species where routine testing is not performed, and when the frequency of testing in cattle is reduced at some future stage, slaughterhouse monitoring becomes more important for detecting circulating infection. Thus, efforts to increase the sensitivity of this monitoring and promote submission of samples from non-restricted herds are recommended. This may be achieved by training of staff responsible for the monitoring. There are ready training packages available in some countries that may be borrowed and used. Moreover, continuous follow-up of submission rates from all animal species is recommended so that feed-back can be given to different actors to encourage their performance.

3. Common pastures

The use of common pastures is already recognised as a risk factor and it is recommended that the suggested biannual pre-movement testing of animals before and after they move to/from common pastures be introduced already this autumn. Testing not only before animals are sent to common pasture but as they come as well would allow for earlier detection and of infections and thus prevention of further spread. Common pastures should be highlighted in the database or somehow specially registered so that closer monitoring of this particular risk can be performed.

4. Wildlife monitoring

At the moment the risk of wildlife reservoirs cannot be estimated and an optimal wildlife surveillance system cannot be designed. However, making use of the system for collecting samples for classical swine fever would allow for a cost-effective monitoring of an animal species that is expected to be an acceptable indicator of the infection in its environment. Hunters involved in collecting samples for CSF from wild boar could be asked to send in retropharyngeal lymph nodes from the same animals for bacteriological examination.

5. Laboratory work

While recognising the high quality of the work performed in the national veterinary laboratory, it is recommended to seek advice from the EU reference laboratory (that will be more than happy to help) on some additional typing routines that are widely used for veterinary purposes in other European countries. This would allow for easier comparison with international data in cases where there is suspicion of the infection being introduced via imported animals.
It is also recommended that histopathology of suspect lesions be introduced in parallel to bacteriological analyses. Thus, it would be possible to determine the association of these methods as regards sensitivity and specificity, as a basis for future use of histopathology as a preliminary test in relevant cases.

6. Quality assurance of tuberculin testing performance

For those veterinary organisations that are accredited, the accreditation programme should include all aspects of tuberculin testing (e.g. calibration of callipers, storage of tuberculin, syringes…). If there is not already a ready training package available at central level, developing such a package is recommended. This may be used not only for training beginners but also for updating and ensuring continuous quality in testing performance. Moreover, inspections of veterinary organisations should not be limited to document checks but also include unannounced on-the-spot inspections of tuberculin testing performance. Detailed analyses of testing data could also be used to monitor the performance of authorised veterinarians. This would be especially important if there were indications of failure of the testing sensitivity in certain cases.

7. Animal markets

When the first stage of testing has been completed and all herds that can easily obtain T3 status have done so, mixing of animals from herds with different status should not be allowed.

8. Compliance with movement restrictions

If possible, it would be very useful to include some automatic signal in the database when an illegal animal movement has occurred. This includes movements from T2 to T3 herds as well as movements from restricted herds. This functionality has now been established in the database and it would allow for efficient monitoring of compliance.
If not already in place, a network or some other form of systematic communication with farmers is recommended. Such communication may include education about contagious diseases and be coordinated with other disease control efforts. Moreover, feedback to farmers about successes and challenges in the control and eradication programmes will help motivate farmers to participate. The system must be adapted to existing organisational structure of the farming industry in the country, on local, regional and national level, and include veterinarians on all levels.

9. Fattening herds

It is recommended to check if movements of livestock from fattening herds other than to slaughter occur. The regular movement from one fattening unit to another in the different stages of fattening is not included in this issue. If there are indications that animals are moved from fattening herds to other types of herds, such movements should be prohibited. Fattening herds may be handled differently as regards some measures and this assumes that the production system really is what t should be, strictly fattening animals for slaughter.

10. Small ruminants

It may be necessary at some point in the eradication process to consider the risk of infection in small ruminants. It is important that the slaughterhouse surveillance system is sensitive enough to detect infected herds. Goats kept for milk-production in herds that have cattle must be tested regularly, according to EU legislation. It is however recommended that all small ruminants kept together with cattle be included in the regular testing, when the cattle are tested.

11. Resource prioritisation

The veterinary field checks to tidy up the database have been very useful and if there are other reasons for having a veterinarian present on some farms they may well continue in the same format. If, however, there is a need to prioritise and save resources such checks may be performed by technical staff and the veterinarians mainly used for tasks where their qualifications are essential. It is however important to keep veterinarians involved in all aspects of the programme and the use of technical staff for some tasks should mainly be employed to free the veterinarians for other work and optimise resources.

Finally, the group would like to thank the Croatian hosts for the well-organised meeting, their hospitality and enthusiasm.

Annex I

Participants:

Subgroup members:

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

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

Dr José Luis Saez Llorente , General Subdirection of Animal Health, M.A.R.M, ES

Dr Maria Pacciarini, I Z S Lombardia e Emilia,Brescia, IT

Dr. Javier Bezos , TB CRL Madrid – Spain

Dr Linda Evans , Veterinary Business Partner (England), Exter Animal Health Office and Worcester Animals Health HQ, UK

EU Commission (DG SANCO-Unit G5- Veterinary programmes):

Dr. Valentina Piazza
Dr. Ana Blass Rico

Hosts

Dr Sanja Separovic, Veterinary Directorate (VD), CVO,
Dr Ankica Labrovic, VD, Animal Health Sector,
Dr Tomislav Kis, VD, Animal Health Sector, Data analysis and reporting Unit,
Dr Ivana Lohman Jankovic, VD, Animal Health Sector, Zoonosis Unit,
Dr Sinisa Mandek, VD, Animal Health Sector, Organisation of veterinary service Unit, Dr Vladimir Cacinovic, VD, Animal Health Sector, Animal I&R Unit,
Dr Zaklin Acinger Rogic, VD, Animal Health Sector, Animal diseases programs Unit,
Dr Silvio Spicic, Croatian Veterinary Institute (CVI), Laboratory for bacterial zoonosis,
Dr Svjetlana Terzic, CVI, Laboratory for Quality Control of Veterinary Medicines,
Dr Vera Katalinic-Jankovic, National reference laboratory for tuberculosis (SNRL-WHO), Croatian National Institute of Public Health. (CNIPH),
Dr Borislav Aleraj, Epidemiology Department CNIPH,
Dr Natasa Loncaric, Veterinary Inspection Directorate, State Veterinary Inspector - Sector for official controls,
Dr Bojan Smrkulj, Veterinary Inspection Directorate, State Veterinary Inspector.

ANNEX II

AGENDA

BOVINE TUBERCULOSIS TASK FORCE MEETING

June 7 to 8, 2011 - Zagreb, Croatia

Time	Topics
9.00 to 9.15	Welcome and introduction
9.15 to 9.30	Organisation of Veterinary Service in Croatia
9.30 to 10.00	Cattle identification and registration system
10.00 to 10.30	History of control and eradication of bovine TB (BTB) in Croatia
10.30 to 11.00	Discussion
11.00 to 11.15	Caffe break
11.15 to 11.45	Legislative framework for BTB eradication
11.45 to 12.30	Implementation of TB eradication program
12.30 to 13.15	Discussion
13.15 to 14.30	Lunch break
14.30 to 15.00	Epidemiological investigation of BTB outbreak
15.00 to 15.30	Laboratory investigation of BTB
15.30 to 16.00	Epidemiology and diagnostics of tuberculosis in humans in Croatia
16.00 to 16.30	Official controls of the implementation of BTB eradication program
16.30 to 17.00	Discussion
	End of the Day 1

9.00 to 9.30	Eradication of BTB in Sisak-moslavina county
9.30 to 10.00	Eradication of BTB in Bjelovar-bilogora county
10.00 to 10.30	Eradication of BTB in Zagreb county
10.30 to 11.00	Discussion
11.00 to 11.30	Caffee break
11.30 to 12.30	Feedback on the meeting by TB Task force
12.30 to 13.00	Conclusions of the meeting
13.00 to 14.00	Lunch break
	End of the Day 2