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04 - Veterinary control programmes

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REPORT OF THE

"Bovine Brucellosis"
TASK FORCE SUB-GROUP

Meeting held in
Ponta Delgada
Portugal, Azores
12-13 June 2007

REPORT OF THE MEETING OF THE BOVINE BRUCELLOSIS SUB-GROUP OF THE TASK FORCE FOR MONITORING DISEASE ERADICATION HELD IN PONTA DELGADA, AZORES, PORTUGAL, 12-13 JUNE 2007

1. Participants: see Annex 1

2. **Agenda**: see Annex II

Location: Ponta Delgada, Azores, Portugal

DAY 1

The Chief Veterinary Officer of Portugal, **Dr. Carlos Agrela Pinheiro** and **Eng**. **Joaquim Pires**, Regional Director for Rural Development (DAS) from Azores welcomed the participants and officially opened the meeting.

The chairman of the subgroup, Dr Ernst Stifter was excused and the meeting was chaired by the Commission (Dr. Francisco Reviriego Gordejo).

The first two speakers were **Dr Antonio Pina Fonseca**, Director of the Directorate of Animal Health and Welfare Services (DSSPA) from the Central Veterinary Office (DGV) and **Dr. Hernani Martins**, Director of the Directorate of Veterinary Services (DSV) of the Autonomous Region of Azores: they gave a presentation of the structure and organisation of the Veterinary Services in Portugal mainland and Azores.

Then **Dr L.H. Medeiros**, responsible for the Veterinary Division from DAS of São Miguel (Azores) gave a presentation of the production system in the dairy sector.

The presentation gave a description of the dairy production system of Azores and related economic activities. Data on the production of the last years were shown and the correlation with the agricultural related activities were pointed out.

Finally, as the agricultural activity is the main pillar of the rural development of the Region, a strategy plan to improve the milk sector was presented.

Dr. L. Flor, Director of the Regional Veterinary Laboratory, gave a presentation on the laboratory diagnosis for Brucellosis.

The main points of the presentation were the following:

The Regional Veterinary Laboratory (Laboratório Regional de Veterinária - LRV) of Azores depends on the Directorate of Veterinary Services (DGV) of the Regional Agrarian Development Board (D.R.D.A.).

This laboratory is located on the island of Terceira and serves as a reference laboratory for the Archipelago of Azores.

In Azores, the brucellosis laboratory diagnosis is based on blood (Rose Bengal [RBT] and complement fixation tests [CFT]) and milk (milk ring-test [MRT]) tests and on isolation, identification and typing of *Brucella*.

Testing schemes were officially stated in a national reference manual and on the regional brucellosis eradication plan. All laboratory techniques are performed according to the NRL (LNIV, Lisbon) recommendations, which fulfil European and international requirements. All antigens are supplied by the NRL and quality controls are included in each series of tests.

Screening tests (RBT and MRT) are performed at the local laboratory of each island, except for Terceira; where it is the LRV who performs such tests. The CFT is used as a confirmatory test and is only performed by the LRV. A regional service collects the bulk milk samples that are tested in MRT, every month in Terceira and São Miguel and every three months in São Jorge and Faial.

The results of RBT and CFT are sent back to veterinary services within 24 hours and 3-5 days respectively.

As in many other European areas, the rate of false positive serological reactions (FPSR) in MRT has been increasing with the decrease of prevalence. For research purposes, the LRV assessed the use of a so-called “Heat inactivation Milk ring-test” as a supplementary test for decreasing the FPSRs’ rate in MRT. However, since this particular test has not been approved in the EU, the LRV now plans to introduce the EU approved milk iELISA in order to improve the specificity of the milk testing procedure.

In officially-free and free herds, when a RB positive result is observed, the same sample is tested in CF for confirmation. If the CF is positive, all other animals of the herd are also tested in CF (even when RB negative). In all other herds, as well as for movement controls, the RB and CF are systematically used in parallel.

Bacteriology is systematically applied on the abortion samples sent to the LRV. Methods used for isolation, identification and typing of *Brucella* fulfil the OIE (and EU) recommendations. *Brucella abortus* biovar 1 has been the unique strain isolated in the archipelago in the past years. Samples of strains are regularly sent to the NRL for confirmation. No RB51 strain has been isolated up to now.

The LRV will be completely rebuilt in the next years.

In the afternoon section, **Dr. A.P. Fonseca**, gave a presentation on the eradication programme for bovine brucellosis in Portugal focusing on the epidemiological situation and measures in place.

The main points of the presentation were the following:

A review of the 2006 programme was made.

In this year, the organization of the Veterinary Services in Portugal (mainland), have 7 Regional Agriculture Directorates (DRA/DSV), and 24 Local Veterinary Services (DIV).

There was 3 Specific Local Programmes in progress, based on RB-51 vaccination at Autonomous Region of Azores (Terceira, Sao Miguel and Sao Jorge islands), Region of Trás-os-Montes (Montalegre), and Region of Alentejo (10 flocks of a single owner). This vaccination programmes involve the immunization of all bovine animals, including pregnant females.

The Entities involved in the implementation of the National Programme are:

National Veterinary Authority – DGV
Regional and Local Veterinary Services
National Reference Lab
Regional veterinary labs for diagnosis (public and private)
Farmers Technical associations/co-operatives with private veterinarians (private organizations with public support)
Farmers

All structures are responsible for their own tasks in the implementation of the programme.

Most important features of the programme are:

Implementation in all country
Herd registration
Animal identification and registration
Control of animal movements
SNIRA – Computer herd and animal movement registration – traceability
Regular sampling of the herds (one check/year for all the animals older than 12 months)
High percentage of herd and animal coverage
Slaughter of positive reactors between 15 and 30 days after the result is available
Animal movement restrictions on herds not free of disease
Qualification of the herds and animals by the scheme of the Directive 64/432 (infected B2.1, not free B2, free with vaccination B3 and officially free B4)
Farmer compensation system for compulsory slaughter of positive animals
Epidemiological investigation
Pre-movement tests
Training of all staff and farmers

Epidemiological situation:

There is a sustained decrease in the bovine herd number in Portugal which has resulted in a loss of 47,6% of herds during the last 7 years, whereas the number of bovine animals remains almost constant.

The herd prevalence index show a decreasing tendency with tiny fluctuations, remaining below 1% until 1995. This index reaches 0.51% on 2006. Incidence index show decreasing tendency as well, reaching in 2006 a value of 0.29%.

Despite this tendency, the Regions of Trás-os-Montes and Alentejo remains problematic, with values of the epidemiological indexes worse than of the rest of country.

Proposals for improvement:

The regional programs must be adapted to the local reality
Epidemiological and risk evaluation must be implemented in the problematic areas
All reactor animals removed in 2 weeks
Extend the “rest period” following the depopulation of a herd
Use of the skin test

Then**, Dr. H. Martins** gave a presentation on the eradication programme for bovine brucellosis in the Autonomous Region of Azores focusing on the epidemiological situation and measures in place.

The main points of the presentation were the following:

A short background on the bovine brucellosis eradication from 1947 (first diagnosis in Azores) and Azorean farms situation was presented.

Due to the high prevalence, it was decided in 2001 to start RB51 vaccination (due to his specific characteristics) from. A description of the main actions to control the plan was made as well as the trend of the disease in the last years (from 1999 to 2007). Then, the critical points and the negative effects of RB51 vaccine were presented.

It was concluded that the disease situation changes from one island to another: some islands are considered "officially free from brucellosis" (Commission Decision 2002/588/EC) while other like Terceira, S. Miguel and S. Jorge are not with a prevalence rate of about 1% and where vaccination with RB51 is carried out.

In particular, excellent results are obtained when vaccination is carried out quickly and the other epidemiological control actions are in place as well. So, it is imperative to carry out a continuous and uninterrupted assessment and the correction must be implemented as soon as possible, otherwise, indirect costs derived from a misled campaign must be added to the economic damages caused directly by the disease

The last presentation was made by **Prof. Dr. F. Boinas**, Faculty of Veterinary Medicine of Lisbon on special programmes for vaccination against Bovine Brucellosis in Mainland, Portugal.

A description of the special vaccination plans in place was made and the main characteristics/benefits of RB51 and S19 vaccines were illustrated. Data following the use of the two vaccines in different parts of the Country where showed.

As a conclusion, it was pointed out that a rapid vaccination plan implementation leads to a good results on the control of the disease as well as the implementation of complementary measures like: increase awareness of veterinarians and producers, abort notification investigation (epidemiology and laboratory) and consideration of epidemiological Unit (herds, areas).

At the end of the day a general discussion with all participants was held.

DAY 2

In the morning TF subgroup met for discussing and agreeing on the main conclusions and recommendations.

During the final meeting the conclusions and recommendations made by the TF subgroup were presented to all participants.

The following conclusions and recommendations were drawn by the Task Force Bovine Brucellosis Subgroup:

1. Mainland

Conclusions

1. Three differentiated areas are identified as regards bovine brucellosis epidemiology: i) zones with special plans, ii) Alentejo region and iii) rest of the country.
2. Alentejo: There is a lack of in-depth epidemiological analysis aimed at identifying risk factors and enabling decision-making on measures to be implemented.
3. Rest of mainland: In the centre and south (Beira interior, Beira litoral, Ribatejo and Algarve) the situation is favourable.

Recommendations

1. Urgent in-depth analysis of the situation in Alentejo is needed.
2. A special plan for Alentejo should be drafted.
3. A differentiated strategy should be applied in the low prevalence areas in the mainland to address the possible false positive reactors on the basis of proper investigations.
4. Rapid depopulation of infected herds in very low prevalence areas should be considered.

2. Azores

Conclusion

1. The Task Force acknowledges the real progress on eradication with success in reduction of the prevalence.

2. Rapid and good implementation of the measures of the programme and in particular vaccination led to more rapid progress in some islands, especially in Terceira.
3. As it was seen in many other low prevalence areas, the predictive value of the positive result of Milk Ring test has showed to be low in the Azores.

Recommendations

1. To maintain all the measures of the programme and specially to increase the vaccination coverage until the whole population is covered.
2. To maintain the pressure of vaccination until sufficient evidence demonstrates sustainable absence of infection in the island.
3. In order to address the false positive reactions of MRT, the group recommends the use of indirect ELISA in bulk milk samples for replacing MRT or at least as a confirmatory test for MRT.

In the afternoon, a visit of two bovine flocks was organised in order to check on the spot the organisation of the farms/controls.

End of the subgroup TF meeting.

Annex I

Participants:

Member of the subgroup:

B. GARIN BASTUJI, Agence Française de Sécurité Sanitaire des Aliments (AFSSA) - Maisons-Alfort Cedex – France

A. GIOVANNINI, Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise "G. Caporale", Teramo, IT

G. O'HAGAN, Department of Agriculture, Food & Rural Development Dublin,IE

J.L. PARAMIO,

Ministerio de Agricultura, Pesca y Alimentacion, Madrid, ES

A PINAFONSECA
Direcçao. Geral de Veterinária, Lisboa, PT

L. STRINGER, Belfast , UK

The chairman of the subgroup **Dr. Ernst Stifter** excused.

Commission: DG SANCO

(Unit 04: Veterinary Control Programmes): Valentina Piazza
Francisco Reviriego Gordejo

Annex II

AGENDA

12 June 2007 – Day 1

9.30 h Welcome and introduction:

- Dr. Carlos Agrela Pinheiro, General Veterinary Director
- Eng. Joaquim Pires, Regional Director for Development Agrarian from Azores

Welcome and introduction – Chairman of the Subgroup/Commission

10.00 h Structure and organization of the Veterinary Services in Portugal.

- Dr. António Pina Fonseca, Director of the Directorate of Services for Animal Health and Production (DSSPA) from the Directorate-General for Veterinary Issues (DGV)
- Dr. Hernâni Martins, Director of Directorate Veterinary Services (DSV) from D.R.D.A.

10.30 h Framing of the productive dairy milk system – Dr. Luís Henrique Medeiros, responsable for the Veterinary Division from Development Agrarian Services of S. Miguel S. Miguel

11.00 h Coffee break

11.30 h The laboratory diagnosis for Brucellosis – Dr. Lídia Flor, Director of the Regional Veterinary Laboratory (DSV – DRDA)

12.30 h Lunch

14.00 h The eradication Programme for Bovine Brucellosis in Portugal: epidemiological situation and measures in place - Dr. António Pina Fonseca – DGV

15.00 h The eradication programme for Bovine Brucellosis at the Authonomous Region of Azores – Epidemiological situation and accompanying measures - Dr. Hernâni Martins, from D.R.D.A.

16.00 h Coffee break

16.30 h Special Programmes for vaccination against Bovine Brucellosis, in mainland, Portugal: Pros and Cons - Prof. Dr. Fernando Boinas, Faculty of Veterinary Medicine, Technical University in Lisbon

17.30 h General discussion: all participants

18.00 h End of the first day meeting

13 June – Day 2

09.00 h	Visit to two bovine flocks and to the Veterinary Division of the Development Agrarian Services of S. Miguel
13.00 h	Lunch
15.00 h	Meeting of TF – BB subgroup
16.30 h	Final meeting - Closing and recommendations
17.30 h	End of the meeting