



The 3<sup>rd</sup> FAO-APHCA/OIE Regional Workshop on Brucellosis Diagnosis and Control  
with an Emphasis on *B. melitensis* (in collaboration with DLD)  
(Sukhothai and Phitsanulok Provinces, Thailand, 21-25 November 2010)

## Conclusions and Recommendations

### Background

1. The 3<sup>rd</sup> FAO-APHCA/OIE Regional Workshop on Brucellosis Diagnosis and Control with an emphasis on *B. melitensis* was organized in collaboration with the Department of Livestock Development (DLD) of Thailand in Sukhothai and Phitsanulok Provinces, between 21 and 25 November 2010.
2. The main objectives of the workshop were:
  - To update on Brucellosis situation in Asia and the Pacific region with an emphasis on epidemiological situation of *B. melitensis*;
  - To update protocol development for the control of Brucellosis;
  - To refresh hands-on trainings on standard laboratory tests for diagnosis of Brucellosis; and
  - To promote collaboration on diagnosis and control of Brucellosis in the region.
3. The workshop was attended by participants from 17 member countries namely: Bangladesh, Bhutan, Cambodia, India, Indonesia, Iran, Lao PDR, Malaysia, Mongolia, Myanmar, Nepal, Papua New Guinea, Philippines, Samoa, Singapore, Thailand and Vietnam.
4. The workshop was composed of the following sessions:
  - Technical lectures on: 1) Diagnosis of Brucellosis in Animals and 2) Brucellosis control and eradication strategies by Dr Bruno Garin-Bastuji, OIE/FAO Reference Laboratory for Brucellosis in France;
  - Review of laboratory diagnosis and standardization (serology and bacteriology) by Drs B. Garin-Bastuji and Monaya Ekgat, DLD of Thailand; and
  - Laboratory practices on: 1) Complement Fixation (CF) Test, 2) *Brucella spp.* isolation, identification and typing and 3) Indirect ELISA and Rose Bengal Test (RBT) and standardization by Drs B. Garin-Bastuji, Monaya Ekgat and their respective teams.



5. Participants from the member countries mentioned in Item 3 above were invited to report on the following issues in their country papers:
  - Livestock population;
  - Brucellosis situation and national surveillance/control programmes and strategy;
  - Laboratory organization focusing on Brucellosis diagnosis;
  - Country plan/policy for regional collaboration on diagnosis and control of *B. melitensis*; and
  - Progress made on the quality assurance of diagnosis and test results from the Rose Bengal Test (RBT) antigens provided by the DLD of Thailand.

## Recognition

*The workshop recognized/reaffirmed:*

6. That Brucellosis, in particular caprine and ovine Brucellosis caused by *B. melitensis*, is recognized world-wide and is still one of the significant animal and public health concerns in some countries in the region where a high serological prevalence rate for the disease in animals as well as in humans is observed.
7. That important efforts are still needed to improve the situation of the disease in some countries in the region where the disease prevalence rate is found to be relatively moderate to high.
8. That laboratory testing and epidemiological information are the key and essential elements for the application of the appropriate disease control and prevention measures in the field.
9. That the most reliable and efficient method for the definitive disease diagnosis is isolation and characterization of the disease agent while this method needs expertise and appropriate equipment. This is also time-consuming and expensive to conduct and sometimes not feasible in some member countries.
10. That no single test can confirm the infection or certify the free status of Brucellosis. Relevant test should be conducted repeatedly to confirm the infection or the free status of Brucellosis.



11. That the Rose Bengal Test (RBT) and the Complement Fixation Test (CFT) are so far the most widely used and effective methods for the serological diagnosis of Brucellosis in small ruminants including sheep and goats and for the national surveillance and eradication programme of the disease.
12. That the following factors are the key elements to design and adopt adequate control measures against Brucellosis in the member countries:
  - Actual epidemiological situation on Brucellosis
  - Technical capacity of Veterinary Services for disease control and laboratory diagnosis
  - Long term financial support (budget availability) in implementing disease control and laboratory diagnosis
  - Adequate facilities for laboratory diagnosis
13. That participants were informed of the reinforcement of the international bio-safety regulation for handling materials contaminated by Brucella or isolation/culture of the bacteria in laboratory, under the regulation of which bio-safety level of laboratories should be BSL2 or 3.
14. That in countries where Brucellosis is observed with low to moderate prevalence and there are constraints/limitations in undertaking an appropriate control and eradication measures, the long-term vaccination is the main tool to control the disease.
15. That, where the infection is endemic, the long-term mass vaccination is the best option to be considered to control the disease.
16. That, where the disease has never been reported in member countries, an appropriate surveillance programme should be implemented to detect possible introduction of the disease and any new outbreak in the country.
17. That a request to provide the member countries with technical know-how and handling methods on packaging/shipping materials (including specimen containers) for diagnosis to regional or international Reference Laboratories was made and noted for consideration for future support by FAO-APHCA and OIE Asia-Pacific Office.



18. That, after the 2<sup>nd</sup> workshop in 2009, RBT antigens produced by the Bureau of Veterinary Biologics, Department of Livestock Development (DLD) of Thailand were provided to 16 participating countries, namely; Bhutan, Brunei, Cambodia, India, Indonesia, Iran, Lao PDR, Mongolia, Myanmar, Nepal, Papua New Guinea, Philippines, Samoa, Sri Lanka, Thailand and Vietnam.

The cost of the reagents was financially covered by FAO-APHCA. In the 3<sup>rd</sup> workshop, the test results were reported by some of the recipient countries.

19. Progress in some countries in terms of improvement of laboratory diagnostic capacity on Brucellosis such as quality assurance including standardization of testing procedures and diagnostic reagents. However, continuous efforts are still needed to be made by the member countries to utilise the knowledge and techniques acquired from the workshops to improve/strengthen their laboratory diagnosis capacity taking into consideration the epidemiological situation in animals and humans in each country.

20. That, there is a need for: (i) sharing information on epidemiological situation of Brucellosis in the region, (ii) the establishment of a regional laboratory network, and (iii) promotion of regional collaboration on the disease diagnosis and control.

21. OIE Twinning Programme between the OIE/FAO Reference Laboratory for Brucellosis in France and the Thai NIAH commenced in July 2010 and will continue for 3 years. It is expected that the Thai NIAH will be in a position to apply to OIE and become an OIE Reference Laboratory for Brucellosis and will function as an International Reference Centre for the Asia-Pacific region.

## Recommendations

*The workshop recommended:*

22. That each participant should take active action to transfer the know-how and technology learned and gained in the workshops to other laboratory staff in his/her respective country.



23. That the combination of RBT and CFT should be considered the most reliable and practical serological tests for diagnosis of the disease in sheep and goats. For all susceptible animal species, diagnostic techniques including serological test and diagnostic reagents should be in compliance with the OIE standard manual.
24. That member countries should actively share information on the disease situation and laboratory diagnostic data amongst themselves to strengthen the regional (laboratory) networking and collaboration to improve the disease situation in the region.
25. That FAO-APHCA and OIE Asia-Pacific should continue providing financial, technical and collaborative supports to strengthen Brucellosis diagnostic capacity for national laboratories in the member countries through assisting the Thai NIAH's relevant activities under the framework of this workshop.
26. That OIE/FAO Reference Laboratory for Brucellosis in France should continue supporting the member countries to improve diagnostic capacity and study disease epidemiology of Brucellosis in the region.
27. That, under the OIE Twinning Programme between the OIE/FAO Reference Laboratory for Brucellosis in France and the Thai NIAH, the participants requested for support on Brucellosis proficiency testing (round robin) to member countries in the region.