

# **Brucellosis Eradication Task Force Report**

**April 5, 2005**

The Brucellosis Eradication Task Force met on Tuesday, April 5, 2005 from 1:30 PM to 6:00 PM CST, during the NIAA 2005 Annual Meeting in St. Paul Minnesota, with 34 people present. Dr. Max Coats served as the Chair and the Vice-Chair Dr. Claude Barton was unable to attend due to illness in the family

The committee session focused on a variety of topics related to the ongoing efforts to eradicate brucellosis in the US.

## **The following speakers presented relevant information:**

**Dr. Debbie Donch, Brucellosis in Cattle: A View from USDA's Veterinary:** Her presentation provided a summary of recently disclosed brucellosis infected herds as well as projected dates when the two remaining Class A states will be able to apply for class Free Status if no additional infected herds are disclosed.

**Dr. John Korslund, Swine Brucellosis: Adapting the PRV Model:** Dr. Korslund's remarks included a summary of the national status picture, Free status 49 states and stage 2 one state which is expected to apply for stage 1 (Free) status in the next few months. During FY 2004 and FY 2005, three infected herd situations were reported. One each in Georgia, Florida, and Hawaii. In addition he described several weaknesses in the National surveillance system. Some details of efforts underway to revise the UM&R were presented. The proposed changes are expected to be completed this fall.

**Dr. Ton Linfeld, Greater Yellowstone Area Brucellosis:** Dr. Linfeld presented an overview of the Greater Yellowstone Interagency Brucellosis Committee which he chairs. Described were the composition, goals, mission and objectives of the group. He reviewed the expired MOU and discussed the status of efforts to establish a new document. The replacement document is in the final phases of coordination and approval and release of the completed document is expected in the very soon. The past accomplishments of the Committee were presented along with a synopsis of completed field studies, research projects. Planned activities were described. The Montana, Wyoming and Idaho state plans were very briefly presented. The next meeting of the GYIBC to be held in Jackson Hole, WY May 24 and 25 was announced.

**Dr. Jim Logan, A Brief Historical Perspective of Brucellosis in Wyoming and Wyoming's Brucellosis Surveillance and Response to the USDA Review:** Dr. Logan presented materials prepared by Dr. Barton who was unable to attend due to a family illness. Background information including cattle population and distribution was presented along with information on the geological and environmental characteristics of the area. General management practices and distribution on ranches was mentioned as well as the distribution of significant wildlife populations. A brief synopsis of the history of brucellosis in Wyoming was presented. The review process, objectives and recommendations were outlined and the follow up review was mentioned. Dr Logan's presentation focused on Wyoming's brucellosis surveillance and response to the USDA review. He detailed the initial state response including the revision of state regulations implementing change of ownership and first point of concentration testing and mandatory Calfhood vaccination. Also testing of all cattle that trailed through Grand Teton National Park was mandated. Extensive public information and outreach efforts occurred. However in 1999 as a result of fading industry support, mandatory first point testing was discontinued, change of ownership testing in the 5 highest risk counties became voluntary. It was noted that the population of bison increased from an estimated 320 in 1997 to approximately 1000 today. The estimated seropositive rate is 70 %. The clear message is that the cattle industry can only be expected to manage the disease in the domestic population and that elimination of the disease in the free ranging population must occur if the disease is to be eliminated in cattle.

**Dr. Dewayne Oldham, The State of Wyoming's Response to the Reoccurrence of Brucellosis in Cattle:** Dr Oldham's presentation was in two parts the first was a review of the Wyoming cattle brucellosis situation. After being free of cattle brucellosis since 1975, four cases have been disclosed since November 2003. The first was detected by the slaughter surveillance system. The initial herd testing December 2003 found 31 reactors and 20 suspects in a herd of 395 cattle. The infection was confirmed by culture of B abortus biovar 1 and the herd was depopulated in January 2004. Subsequent testing of 11 contact herds containing 3972 cattle failed to disclose additional infection, however trace out testing of 12 head that had been previously been sent to a feedlot disclosed 6 reactors and as a result, Wyoming lost their 'Free' status. In June of 2004 a single animal in a group of 105 head being tested prior to movement was test positive and subsequently found to be infected with B abortus Biovar 4. Testing of the 3 contact herds found one to also be infected with B abortus Biovar 4. Later in June 2004 a group of 50 head were tested at a market in SD and two were classified as suspects. Samples from the suspects were reported to be B abortus Biovar 1. Extensive investigation followed and it appears that the cultures being positive were due to a laboratory error. As a result of these events Wyoming has increased their surveillance activities, increased the staff of the Wyoming Livestock Board enhanced their communication and outreach activities the Wyoming game and Fish Department has increased their surveillance efforts. The Governor appointed a special group to study the situation and make recommendations. Dr Frank Galey, Dean of the University of Wyoming's College of Agriculture was chosen to be Chair of the Governors Brucellosis Coordination Team. Dr Oldham presented information provided by Dr Galey who was unable to attend this meeting. The charge to the team was to identify issues, best management practices and make recommendations related to four topics. Those were: brucellosis in cattle-regaining and maintaining brucellosis free status; provide a roadmap for future cases; address human health; and reducing and eventually eliminating brucellosis in wildlife paying special attention to elk feed grounds. The 'team' was composed of 19 members and 10 technical advisors. The group sought broad based public input. They developed 28 recommendations and rendered their report to the Governor on 11 January 2005. The implementation phase is underway and the team is charged to reconvene annually.

**Dr. Bret Marsh, Exploring New Solutions to Long-Standing Challenges:** Brucellosis in the GYA : Dr Marsh presented information about a technical workshop to be held at the University of Wyoming on the 16<sup>th</sup> and 17<sup>th</sup> of August that will be bringing world recognized experts from a wide range of governmental agencies and academia to address the research and development needs for vaccines, vaccine delivery systems and diagnostics and to provide estimates of the costs of meeting those needs. In addition to the experts selected observers will be invited. Sessions will be open to the public and there will be scheduled opportunities to take public comment. The report of this group is to be presented this fall at the annual USAHA meeting.

**Dr. Phil Elzer, Enhancing Brucellosis through Vaccine Research at LSU:** Dr Elzer provided an overview of the processes involved in developing a brucellosis vaccine. Models currently in use include cattle, swine, and goats. A brief description of methods of evaluating vaccine candidates was provided followed by an explanation of the development processes. These process included evaluation of the colonization activity of the candidate, assessment of the pathogenesis and safety of the candidate and finally an assessment of the efficacy of the vaccine candidate. Dr Elzer provided some information on a broad range of candidate vaccines being considered. They included assorted B abortus RB-51 derivatives, assorted B suis VTRS-1 derivatives, some B abortus mutant and 'ghost' candidates, and candidates provided by other institutions from the US and overseas. Dr Elzer stresses the need to be able to conduct large scale field trials as part of a complete assessment of vaccines and that current regulations are, on occasion making it necessary to conduct these activities overseas.