

RESOLUTION NUMBER: 17 **APPROVED**

SOURCE: COMMITTEE ON BRUCELLOSIS

SUBJECT MATTER: **BRUCELLOSIS IN THE GREATER YELLOWSTONE
AREA**

BACKGROUND INFORMATION:

The state and federal governments and the livestock industries have spent billions of dollars since 1935 to eradicate *Brucella abortus* (*B. abortus*) infection from cattle in the United States (US). The presence of *B. abortus* in the US has significant economic impact upon the livestock industry and may have an impact on international trade.

The only known remaining focus of brucellosis caused by *B. abortus* in the US is the bison and elk in the Greater Yellowstone Area (GYA). The United States Animal Health Association (USAHA) supports the efforts of the GYA state and federal agencies in their efforts to prevent exposure of livestock to brucellosis from elk and bison in the GYA and encourages the efforts of the GYA state agencies to control brucellosis in bison and elk in the GYA. Through the significant efforts of the federal/state/industry bovine brucellosis eradication program, Wyoming was declared bovine brucellosis Class Free in 1983, Montana in 1985, and Idaho in 1991. No cattle brucellosis affected herds were detected in the GYA for over a decade.

A brucellosis affected cattle herd was then detected in 2002 in Idaho, followed by the disclosure of additional affected herds in subsequent years in all three states in the GYA. Wyoming lost its Brucellosis Class Free status in 2004, Idaho lost its Brucellosis Class Free status in 2006, and Montana lost its Brucellosis Class Free status in 2008, all due to transmission of *B. abortus* from wildlife to cattle. All three states subsequently regained Class Free status. Due to recent program changes, at this time, the states can still remain designated as "Class Free", and additional program status definition changes are pending. However, brucellosis continues to spread to livestock herds in the GYA. Since 2002, 21 brucellosis affected cattle and bison herds in the vicinity have been identified. Animals from herds disclosed in Fiscal Year 2011 and 2012 have been traced out to 14 states. This trend is not only extremely costly to the affected cattle herd owners and states, but seriously threatens the brucellosis free status of the rest of the country. The reasons for this alarming increase in brucellosis in cattle and domestic bison herds in the GYA are unclear and the large number of cases disclosed in the last decade is alarming. Without a better understanding of what has changed in the last 10 years resulting in this surge of brucellosis affected herds, such as factors or changes in wildlife or livestock populations, it will be difficult to mitigate transmission and to arrest the continued spread of brucellosis.

RESOLUTION:

As part of understanding the apparently changing dynamics of brucellosis in the Greater Yellowstone Area (GYA), the United States Animal Health Association (USAHA) strongly urges that the United States Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services in partnership with the state and federal wildlife agencies, undertake a comprehensive epidemiologic study to determine why the frequency of cases of transmission from elk to cattle has increased so dramatically in recent years. The information learned from this study can then be used to develop steps to more effectively prevent the risk of brucellosis spread to cattle and domestic bison and to eliminate brucellosis from cattle and domestic bison in the GYA and the United States.

INTERIM RESPONSE:

The U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services (VS) recognizes the concerns of the United States Animal Health Association and appreciates the opportunity to respond. VS agrees that prevention of brucellosis transmission from wildlife to cattle will be more effective with a better understanding of the factors associated with disease dynamics in wildlife populations.

The increase in brucellosis in domestic herds is due to increases in disease prevalence in elk populations and in elk contact with domestic herds. A comprehensive understanding of the role of elk in the transmission of brucellosis to cattle will require a broad evaluation of not only epidemiologic factors, but also the sociologic and ecologic factors associated with shifting elk behaviors and population dynamics affecting disease transmission.

The study of the sociologic and ecologic factors is outside of APHIS expertise and authority. However, VS is currently supporting activities that will improve the understanding of factors associated with disease dynamics and transmission, including: 1) a cost-benefit analysis of the reduction of brucellosis prevalence in elk in the Greater Yellowstone Area. This analysis is projected to be completed in late spring of 2013. VS will make the results available when the studies are completed. 2) a stochastic model that standardizes the evaluation of Brucellosis Management Areas within the Greater Yellowstone Area and uses data from both wildlife and livestock surveillance and survey activities. This model has been applied for current Brucellosis Management Areas. Model revisions, based on an independent review will be made in fiscal year 2013 and 3) cooperative agreement funding that supports wildlife agencies' disease surveillance and monitoring efforts in elk populations.