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**FOR IMMEDIATE RELEASE  
Thursday, June 17, 2004  
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## **An Overview and the Economic Impacts Associated with Mandatory Brucellosis Testing in Wyoming Cattle**

As of February 13, 2004, the Federal government withdrew Wyoming's brucellosis-free status after finding animals in two herds, one in Sublette County and the other in Washakie County, infected with brucellosis. A special report completed by the Economic Analysis Division provides an overview into the brucellosis problem and the potential economic impacts associated with the disease. Brucellosis is a disease that has been a quandary for U.S. cattle producers since the 1840's. Historically, it is believed that brucellosis once affected 10% of the U.S. cattle population and 30% of cattle herds. Over the past century, Federal and State governments, along with the livestock industry, have endured billions of dollars in direct losses and cost efforts to control and eliminate brucellosis.

When Wyoming lost its brucellosis-free status earlier this year, new emergency Federal requirements for mandatory testing were put into place to prevent interstate transmission of brucellosis. Producers could be expected to pay \$1.50-\$11.50 per head for brucellosis testing. The Wyoming Livestock Board (WLSB) and the Wyoming State Veterinary Laboratory (WSVL) estimate that 330,000 cattle may be tested this year alone. Four potential cost scenarios could occur from brucellosis testing: (1) \$495,000 lost in livestock sales in 2004, (2) A total loss of \$3.465 million in livestock sales between 2004-2010, (3) \$3.795 million lost in livestock sales in 2004, and (4) A total loss of \$25.565 million in livestock sales over the seven year period. According to Amy Bittner, an economist with Economic Analysis Division, "The employment impacts from low cost testing could result in 11 jobs initially lost in the farm sector. Additionally, if a higher testing cost was instituted then 87 farm jobs could be eliminated due to the decrease in livestock sales. Secondary employment effects may also include reductions in private non-farm employment such as in the retail and services sectors."

It is difficult to determine the overall economic impact that mandatory brucellosis testing will have on the farm sector because it is such a small segment of the economy. In 2000, only 3.1% of U.S. employment was in agriculture. In that same year 5.5% of Wyoming jobs were classified as agricultural. Employment in Wyoming's farm sector measured in 2001 was 12,346, and an even smaller number, 2,663, were employed in the forestry, fishing, hunting, and agricultural support services sector. Approximately 40% of these farm operators do not consider farming their principal occupation and spend a vast amount of time working off the farm. Overall, an average of 30% of farmers spend over 200 days working off the farm. Agriculture is an important source of income in certain counties across the State such as Niobrara, Goshen, and Big Horn. These counties tend to have a larger percent of individuals employed in agriculture in comparison to other areas in the State.

According to the Animal and Plant Health Inspection Service (APHIS), the economic impact of the new mandatory brucellosis testing measures to the State may be minimal. When APHIS devises a work plan to deal with an issue such as a brucellosis outbreak it considers whether the rules will be “economically significant” to the parties or areas affected by the new policy. However, this assumption is based on the idea that an economically significant impact amounts to an annual cost of \$100 million or more or that adversely affects certain facets of the economy “in a material way.” Wyoming’s economy and population differ immensely in comparison to other states and the Federal government is not required to take into consideration the uniqueness of the State’s economy and demographic make-up when instituting these new testing regulations. “A \$1-2 million negative economic impact may not be considerable in other states, but it could be detrimental due to Wyoming’s sparse population and lack of economic diversification,” observed Bittner.

Prior to the mandatory brucellosis testing requirements, the WSVL surveillance tested 50,000 samples annually using \$65,000 appropriated from the Federal government. Now the estimated number of samples to be tested is 280,000 more than the previous year, but the amount of Federal assistance dedicated for testing costs is still the same, \$65,000. “An important question to ponder is where will the additional money come from to cover the expense of testing and future testing if Wyoming does not regain its brucellosis-free status in February 2005? Potential sources of additional funds include the WLSB, Federal government, the State of Wyoming, and perhaps agricultural producers will have to pay more for testing,” stated Bittner.

Producers may lose sales of cattle to other states and foreign countries that do not want to take the risk of buying Wyoming cattle because it may jeopardize their brucellosis status. Estimates of specific economic losses related to brucellosis infection include a cost of \$200 per infected cow in the first year of infection. Breeding problems, abortions, culling, weak calves and replacement rates could create a second year cost of \$5.82 per infected animal. These examples are considered worst-case scenarios because they assume an unvaccinated and undetected herd.

Additional testing costs will most likely decrease producer profits. In 2001, the profit margin for all Wyoming agricultural producers totaled \$74.3 million. There are approximately 9,200 agricultural operations in Wyoming. By dividing total profit, \$74.3 million, by the total number of operations an \$8,076 profit per producer for 2001 is obtained. Utilizing the annual brucellosis testing cost figures discussed earlier, the low-end being \$495,000 and high-end of \$3.795 million; the profit margin for agricultural producers would be reduced to \$73.8 million or \$70.5 million respectively. Annual individual producer profit would only be \$8,022 or \$7,663, respectively. “These lower profit margins may also contribute to the issues discussed earlier in regards to farm employment. Many producers feel it necessary to have other occupations in addition to agricultural production,” Bittner said.

On the other end of the spectrum, mandatory brucellosis testing may have a positive impact on the agricultural support services sector. An increase in the number of cattle that need to be tested could boost veterinary services. The reimbursement allocation from House Bill 0054 will make it easier for veterinarians to recover their brucellosis testing costs. According to Bittner, “Veterinarians may also increase their revenues since a greater number of animals need to be tested.”

The complete report is available at: <http://eadiv.state.wy.us>. For additional information about this report please contact the Economic Analysis Division at (307) 777-7504 or e-mail: [ead@state.wy.us](mailto:ead@state.wy.us)