



RESOLUTION NUMBER: 24 **APPROVED**

SOURCE: **COMMITTEE ON BRUCELLOSIS**

SUBJECT MATTER: **The Re-evaluation of the Brucellosis Ring Test**

BACKGROUND INFORMATION:

The Brucellosis Ring Test (BRT) has been used in the United States Brucellosis Eradication Program for decades. It is also used worldwide to detect brucellosis on both the herd and individual animal basis.

The National Veterinary Services Laboratory recently reported that the current BRT antigen is consistently demonstrating false positives. This BRT performance is not consistent with the past performance in the United States or the world. Therefore, it appears that there may be a problem with the current antigen or testing protocol.

RESOLUTION:

The United States Animal Health Association (USAHA) recommends that the United States Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services review the process for, and evaluate the production of Brucellosis Ring Test (BRT) antigen. USAHA further recommends that the BRT procedures, interpretation, and program use be re-evaluated immediately to determine where discrepancies may exist and solutions be implemented to correct them.

INTERIM RESPONSE:

The U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services recognizes the concerns of the U.S. Animal Health Association and appreciates the opportunity to respond. This resolution was introduced because of the poor performance of the Brucellosis Ring Test (BRT) during a pilot project that was conducted as the result of 2014 resolution #21 "Validation of the BRT for large dairies." The pilot study results indicated the BRT severely underperformed in comparison to commercially available ELISAs; however, these ELISAs are not approved by the Center for Veterinary Biologics.

The National Veterinary Services Laboratories (NVSL) has carefully evaluated the BRT antigen performance and production and could not identify any problems. Production processes, which include cell propagation, cell inactivation, cell dye procedures, and pH range of final antigen have remained consistent. Additional work is being conducted to examine centrifugation processes that may influence antigen sensitivity or specificity. Based upon current production evaluation no determining factor can be identified that would affect the antigen performance using larger milk volumes.

Historically, NVSL had only evaluated antigens at the 1mL test volume due to use in smaller volume milk testing, individual animal testing, or smaller bulk milk tank volumes. Specificity problems were identified when antigens were formally evaluated at test volumes larger than 1 mL and these problems likely always existed. The NVSL has evaluated the BRT antigen produced in the United Kingdom and detected no improvements in specificity. Additional, but limited, side-by-side testing in collaboration with the Texas Animal Health Commission comparing BRT with commercially available ELISA tests suggest the ELISA

tests are superior, especially on larger herd size bulk tank samples. The use of these ELISA tests may provide an option for replacement of the BRT antigen.