

UNITED STATES ANIMAL HEALTH ASSOCIATION - 2008 RESOLUTION

RESOLUTION NUMBER: 43 APPROVED

SOURCE: COMMITTEE ON SHEEP AND GOATS

SUBJECT MATTER: ENZYME LINKED IMMUNOSORBENT ASSAY (ELISA)
TESTING OF GOAT MILK FOR *BRUCELLA MELITENSIS*

BACKGROUND INFORMATION:

Brucella melitensis infection in goats causes severe systemic disease in humans, who are often infected by consumption of raw goat milk products. It is responsible for more clinical cases of brucellosis and more human suffering worldwide than all other *brucellae*. A bulk milk test for goat brucellosis is needed in the diagnostic battery of brucellosis tests in small ruminants. The Pasteurized Milk Ordinance (PMO) requires annual testing of dairy goat herds. However, no herd level test is available for screening and goats have to be tested individually by serology. This is time consuming, costly, and stressful for the animals.

The National Veterinary Services Laboratory (NVSL) and other research partners developed an indirect enzyme linked immunosorbent assay (ELISA) using *Brucella melitensis* strain 16M antigen to detect brucella antibodies in goat milk. Initial research on this test using individual milk samples from experimentally-infected goats and laboratory simulated mock-bulk milk suggest this test may be a good bulk milk test for goats, especially in herds segmented in groups of 50 animals or less.

RESOLUTION:

The United States Animal Health Association (USAHA) requests the United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Veterinary Services (VS), National Veterinary Services Laboratory (NVSL) develop and validate the *Brucella melitensis* indirect enzyme linked immunosorbent assay (ELISA) for bulk tank sampling of goat milk through the production and standardization of a *Brucella melitensis* ELISA antigen as soon as practical.

RESPONSE:

USDA, APHIS, Veterinary Services

The U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services, appreciates the United States Animal Health Association's interest in brucellosis testing. The National Veterinary Services Laboratories (NVSL) can facilitate the development and validation of the *Brucella melitensis* indirect enzyme

linked immunosorbent assay (ELISA) through the production and standardization of a *B. melitensis* ELISA antigen. NVSL will also assist in the standardization of the tests for laboratories wishing to conduct bulk testing of goat milk for *B. melitensis*.