

Pattarin Opaschaitat 2011: Prevalence, Risk Factors, and Quantitative Risk Assessment (Introduction Level) of Caprine Arthritis Encephalitis Virus in Meat Goat at Chainat Province, during October 2009 to October 2010. Master of Science (Veterinary Epidemiology), Major Field: Veterinary Epidemiology, Department of Veterinary Public Health and Diagnostic Service. Thesis Advisor: Assistant Pipat Arunvipas, Ph.D. 65 pages.

A cross sectional study was carried out, from October 2009 to October 2010, to estimate the prevalence, the risk factors, and quantitative risk assessment (introduction level) of caprine arthritis encephalitis virus infection (CAEV) in meat goats in Chainat province.

Questionnaires A (farmers) were collected from 61 herds, and 1,333 samples of sera were randomly selected and examined for CAEV antibodies using cELISA test kit. Analysis univariate logistic regression at $p < 0.05$, then multivariate logistic regression at $p < 0.05$ for the risk factors. Questionnaires B (experts) were collected from 9 expert opinions. Analysis the distribution model that run 5,000 times, 4 simulations, using a Monte Carlo approach implemented on a commercial software (@Risk version 5.5).

Result showed a true prevalence of 11.51% at herd level. Multivariate logistic regression showed significant risk factors associated with farm infection. Factors include herd size ($P < 0.05$; OR: 22.016; 95% CI: 1.55 – 311.92), long time raising of the farm ($P < 0.05$; OR: 1.776; 95% CI: 1.02 – 3.08). The CAEV infected farms tend to have animals with history of mastitis ($P < 0.05$). The result of the present study indicated that Chainat province has CAEV in the area and risk factors were about farm management. The probability of introduction of CAEV into goat farm decreased by test the animal before bringing new goats into farm 1.23 to 1.97 times. Therefore, appropriate screening tests and measurements of prevention are necessary to prevent the spreading of infection to other areas.

Student's signature

Thesis Advisor's signature