

Chanya Kengradomkij 2014: Epidemiology of *Neospora caninum* Infection in Water Buffaloes in Northeast Thailand. Master of Science (Veterinary Parasitology), Major Field: Veterinary Parasitology, Department of Parasitology. Thesis Advisor: Associate Professor Sathaporn Jittapalapong, Ph.D. 99 pages.

Neospora caninum is an important obligate intracellular protozoa that causes neosporosis in cattle worldwide. Neosporosis is one of the major diseases that have an impact on cattle production such as a reduction of milk yield, an increasing of herd abortion and a culling of animals; therefore, leading to the substantial economic losses. Bovine neosporosis in Thailand has been concerned due to its effect on animal production; however, information of neosporosis in buffaloes in Thailand is very scattered. The objectives of this study were (1) to detect antibodies against *Neospora caninum* infection of water buffaloes in northeast Thailand by using the indirect fluorescent antibody test (IFAT) and (2) to identify factors related with *N. caninum* infections of water buffaloes. In 2010, the sera of 628 water buffaloes from 288 farms in northeastern provinces of Thailand including Ubon Ratchathani, Surin, Buri Ram, Si Sa Ket, Sakon Nakhon, and Roi Et were collected and tested by IFAT. An overall positives to *N. caninum* were 9.1% (57/628) and was ranged between 3.9% and 16.7% among six provinces and Ubon Ratchathani had the highest individual prevalence at 16.7% (23/138). The southern part of northeast Thailand had the higher infection 13.2% compared to the northern part (4.2%). The total herd prevalence was 16.7% (48/288) and Si Sa Ket had the highest farm prevalence (36.4%, 8/23). The herd size was found that the farm with more than 5 animals/farm size had higher prevalence (30.0%) than another group (16.2%). Water buffaloes with > 10 years old (16.1%) had the statistically higher prevalence than buffalo with 5-10 years (13.4%), 3-5 years (9.2%), and less than 3 years (1.2%) ($p < 0.001$). However, there were no significant differences found regarding sexes.

Student's signature

Thesis Advisor's signature