

PREVALENCE OF PORCINE *CRYPTOSPORIDIUM* INFECTION IN SRI LANKA – A PRELIMINARY STUDY

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Piglet diarrhea is one of the major causes for profit loss in the swine industry of Sri Lanka. As *Cryptosporidium* spp. could be a causative agent, this study was undertaken to determine the prevalence rate of *Cryptosporidium* infection in pigs in Sri Lanka and to determine the species involved.

Faecal samples (n=642) were obtained from small, medium and large-scale farms in the districts of Gampaha (n=98), Puttalam (n=480) and Colombo (n=64), where sixty three percent of the total pig population is distributed. Animals were randomly selected and divided in to 5 groups according to the age. (Less than 2 months old, 2-4 months, 4-6 months, 6-8 months, more than 8 months) The study was conducted during March 2002 to May 2002.

Cryptosporidium oocysts were identified by salt floatation technique followed by the modified Ziel-Neelsen acid-fast staining method. The prevalence rate for each age group in each district was calculated. Positive samples were pooled according to the district, and subjected to Polymerase Chain Reaction (PCR) using primers designed from the β -tubulin gene of *Cryptosporidium parvum* (5'GATTGGTGCTAAATTCTGGG3' & 5'GTCTGCAAAATACGATCTGG3') to identify the species. The PCR products were subjected to electrophoretic separation in 1% Ethidium Bromide stained agarose gel.

The amplified product size of 460bp confirmed that pigs from all three districts were shedding *Cryptosporidium parvum* oocysts. The prevalence of *Cryptosporidium* infection in the districts of Puttalam, Gampaha and Colombo were 17.1% (82/480), 10.2% (10/98) and 14.1% (9/64) respectively. In Colombo district highest prevalence of 20% (3/15) was noticed in animals between 6-8 months of age whereas in Gampaha it was 18.5% (5/27) and seen in animals less than 2 months old. In the Puttalam district the majority of animals shedding oocysts (28%) were in the 2-4 month age group.

This study shows that *Cryptosporidium* infection is prevalent in pigs in Sri Lanka with an overall prevalence of 15.7% (101/642) in the districts of Gampaha, Puttalam and Colombo. The species is *Cryptosporidium parvum*. Oocyst shedding was high in animals between 2-8 months age. The majority (89.5%) of infected animals were asymptomatic (575/642). These animals should be identified as they can act as reservoir host of the parasite and can disseminate the disease to susceptible hosts. Although there was no significant difference in oocyst shedding according to the size of the farm, well-managed farms had a low prevalence rate.

Faecal samples from all districts should be tested to obtain a clearer idea of the prevalence rate of *Cryptosporidium* infection in the country.