A-02 Prevalence of *Sarcocystis* infection in slaughtered cattle and goats in Sri Lanka

G S P de S Gunawardena[1], M B Navaratne[1], H M L K Algama[1],
I V P Dharmawardena[2], Y Gammulla[3]
([1]*Veterinary Research Institute, Gannoruwa, Peradeniya,*
[2]*Municipal Abattoir, Colombo,* [3]*Municipal Abattoir, Kandy*)

Sarcocystis species are heterogeneous, cyst-forming, protozoan parasites found in man and many species of domestic and wild animals. Besides the zoonotic potential, the cysts of *Sarcocystis* in meat are a serious meat hygiene problem. Moreover, pathogenic *Sarcocystis* species cause disease and death to the intermediate host.

Between April 1995 and April 1996, 1730 samples of skeletal muscle and oesophagus collected from unselected cattle (n=384) and goats (n=545) slaughtered at the Kandy and Colombo abattoir were examined for the presence of *Sarcocystis* species. Samples collected from cattle included muscle tissue from different body regions of the carcass. Isolation and identification of the parasite were made using pepsin-HCl digestion technique. Paraffin sections (3-4 ìm thick) of infected muscle tissue stained with haematoxylin and eosin were also used to study the morphology of the parasite.

Based on the cyst morphology, 3 different species of *Sarcocystis*: *S.cruzi, S.hirsuta* and *S.hominis* were identified in muscle tissue of cattle. Dogs, cats and humans serve as definitive hosts for these three species respectively. However, only *S.capracanis* for which dogs act as the definitive host was seen in goats. Although 75.8% of the cattle carcasses examined were infected with *Sarcocystis* species, only 35.4% of goat carcasses contained the parasite. There

were no significant ($p<0.05$) differences in the distribution of the parasite among different body regions of cattle.

According to foreign literature, acute sarcocystosis has been identified as a cause of enteric disease characterised by nausea, vomiting and diarrhoea in humans. Certain toxins produced by *Sarcocystis* spp. in uncooked or under-cooked meat have also been considered as a source of food poisoning. Apart from the production losses due to chronic sarcocystosis, infection with pathogenic species, e.g. *S cruzi* leads to anaemia, abortion, cachexia and death in ruminants. However, information with regard to the human and livestock diseases caused by this parasite in our country is scanty.

Results of this study indicate that a substantial proportion of our cattle and goat population are a potential source of *Sarcocystis* infection for both man and animals in the country.

Financial assistance by NARESA (Research grant RG/95/V/1) is acknowledged.