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**Comparative study on paramphistomiasis in buffaloes reared in a farm and a village house, and the potential factors that contribute to the spread of the disease.**

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Paramphistomes are Digenean Trematodes which are parasitic mainly on ruminants. Paramphistome infections occur in large numbers in Sri Lanka but, detailed information on the actual prevalence of the disease in Sri Lanka is not available as no statistics on this issue are being kept. This disease represents one of the major constraints in Sri Lanka's large ruminants' husbandry. Economic losses are due to mortality, reduced growth rates, working capacity, low milk production and low productivity; infected animals fetch lower prices at slaughter. Except in few places cattle/buffalo rearing in Matara district has not carried out in large scale. According to the information available at the Veterinary Office, Department of Animal Production and Health, Paramphistomiasis is commonly found among buffaloes in Matara district. But no records are maintained on infected individuals. Therefore the study of prevalence and distribution of Paramphistomiasis in Matara district is an important issue. Present study was focused on the prevalence of Paramphistomiasis in two selected sites in Matara district; a farm situated in a suburban area of Matara where buffaloes were managed semi intensively and other site is in village area where buffaloes were managed by extensive farming. Overall objectives of the study were, (i). To compare the total prevalence of Paramphistomiasis among farm reared buffaloes and buffaloes reared in the village house (ii). To compare the prevalence of the disease among age groups within site and between sites (iii). To compare the overall EPG (Egg Per Gram) in the faecal samples between farm reared buffaloes and buffaloes in the village house (iv). To compare the EPG in the faecal samples among age groups within site and between two rearing systems (v). To compare the population distribution of intermediate host; *Indoplanorbis exustus* within site and between sites (vi). To study and compare the physic chemical parameters of water bodies in two sites. Faecal samples of fifty-one farm reared buffaloes and thirty-nine of village house reared buffaloes were examined by sedimentation technique. EPG values and infection prevalence were obtained. Distributions of intermediate host population determined by belt transect method and random sampling method in the farm land. As village

house area was a huge area, only belt transect method was used. Using the data collected, intermediate host population density, frequency and abundance were calculated. Physico chemical parameters of the water bodies found in the two sites were also obtained. Overall EPG values of two rearing system were not significantly difference ( $p = 0.438$ ). With exception of 1 – 3 y age groups between two rearing system ( $p = 0.01$ ), there were no significant difference between EPG in age groups in two sites. Considering the EPG values among age groups, within site, significant difference found only between age groups 1 – 3 y and 3 – 5 y in farm reared buffaloes ( $p = 0.015$ ) and 1 – 3 y and 3 – 5 y in village house reared buffaloes ( $p = 0.003$ ). Overall infection prevalence in farm reared buffaloes and village house reared buffaloes were 70.6% and 92.3% respectively. Infection prevalence were significantly difference ( $p = 0.005$ ) among age groups between sites while no significant different ( $p = 0.298$ ) was found among age groups within same site. Population frequency of snails were significantly difference ( $p = 0.025$ ) between two site while there population density was not significance difference ( $p = 0.11$ ). Neither frequency ( $p = 1.0$ ) nor density ( $p = 1.0$ ) of intermediate host were significantly different among the plots within the farm land. But there was a significant difference between intermediate host population frequency ( $p = 0.042$ ) and no significant differences between population density ( $p = 1.0$ ) among plots within village house area. Most of the physic chemical parameters were significantly different between two sites than in water bodies in same site. The risk of Paramphistomiasis may be considerably reduced with a high standard of grazing management and other prophylactic measures are routinely applied. Such managerial practices as avoidance of permanent snail habitats, provision of alternative watering places during the dry season, use of correct stocking rate, regular and strategic anthelmintic treatment are various methods of snail control. These could be proposed as reduce in prevalence of Paramphistomiasis in these area.