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Parasitology 2018: Epidemiological studies on ovine gastrointestinal parasites and the associated risk factors in some mixed farms in Bahrain - Abdalla Fadlalla Azrug Ahmed - CVL- Agriculture and Marine Resources Affairs

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Background: Despite of Bahrain limited landspace, livestock production represents one of the back bones of the public economy. Goats and sheep have an important contribution in human livelihoods in Asia and Africa regions (FAO, 2015). Goats and sheep population mainly owned by smallholders in mixed farm systems. Gastrointestinal parasitism is one of the main health hazards associated with economic losses, lowered productivity and performance reduction. Material and Methods: A longitudinal 6 months study conducted in 7 sheep-goat farms located in the North Province of Bahrain following owners complains of emaciation, reduced productivity and losses among their herds during January – June 2017. The main objective of this investigative study was targeted for the prevalence of gastrointestinal parasites in such farms. The study conducted among 400 sheep and goats of different breeds, ages and sexes in closed and semi-closed farms. Fresh faecal and EDTA blood samples obtained directly from rectum and jugular veins respectively. A total of 73 (18.2%) samples and 41 (10.2%) blood samples collected from clinically infested animals. Also post-mortem gastrointestinal tract organs (abomasum and rumen) collected from 6 freshly dead animals. Faecal egg counts (FEC per gram faeces) determined by Flotation and Sedimentation methods. Modified McMaster chamber technique used for identification and counting nematodes, cestodes and trematodes eggs and protozoan coccidia oocysts. Moreover, faecal cultures prepared by incubating 3-5-gram faeces at room temperature (24-27 C˚) for 7 -14 days to obtain infective larvae by modified Baerman apparatus technique. Blood smears from fresh EDTA blood samples for blood protozoan parasites in addition to determination of packed cell volumes (PCV) by hematocrit capillaries and centrifuging technique. Results: Haemonchus contortus was the most dominant helminth detected, 38 samples were positive (52.1%) of which (31.4%) were mixed with other helminth species. Other parasites detected involved Trichuris (17%), Moniezia (2.1%), Nematodirus (1.3%) and Eimeria (21.9%) respectively. Faecal egg counts per gram showed most cases of Heamonchosis with heavy infestation over $(7\text{-}10)^3$ eggs /gram Parasitic prevalence rates estimated as percentage ratio of number of positive samples divided by total number of animals examined (d/n)%. Mature Haemonchus contortus were obtained by washing post-mortem abomasum into deep plastic trays, beakers and mature parasites collected using petri dishes with fine forceps examining under microscope. Most cases positive with Haemonchus contortus showed drop in PCV indicating that Haemonchosis positive animals suffered from anemia. Discussions and Conclusion: Parasitic prevalence rates varied among ages where Hemochosis was mostly in old ages (3-5) years (58.7)% rather than young ages, while Eimeria mostly detected in young ages under 6 months (71.2)%. There was no significant effect noticed on animal sexes or breeds. Farm management systems, vegetation patterns and miss-usage of anthelmintics were the main risk factors associated with parasitic.

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