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Title of thesis : Investigations on gastrointestinal parasitism in migratory sheep and goat of Himachal Pradesh  
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**Abstract**

The present investigation was carried out to study the incidence of gastrointestinal parasitism in migratory sheep and goats. The study was conducted in 3 migratory flocks. The incidence of gastrointestinal parasitism along with haematobiochemical alteration at different altitudes was studied. A total of 220 faecal samples of goats and 200 faecal samples of sheep were collected. The overall incidence of GI parasitism was 94.09 percent in goats and 86.5 percent in sheep. The mean EPG was  $1357 \pm 125.30$  in goats and  $1523.25 \pm 98.50$  in sheep indicating severe parasitism. In flock I Strongyle was the major GIT parasite in both sheep and goats at high altitudes. At mid-hill altitude, mixed infection was more prevalent in goats and strongyle was the major GIT parasite in sheep. At low altitudes, Strongyle was the major parasite in both sheep and goats. Mean EPG at high, mid and low hill altitudes was  $758.82 \pm 60.34$ ,  $1190 \pm 110.30$ ,  $1762.42 \pm 140.38$  in sheep and  $1036 \pm 80.24$ ,  $1653.33 \pm 140.36$  and  $1300 \pm 110.20$  in goats respectively. Haematologically values of TEC, PCV, Hb and MCV were high at high hill altitude than mid and low hills altitude both in sheep and goats. Biochemically calcium and phosphorus were high at low hill altitude than at high and mid hills altitude both in sheep and goats. The concentration of Iron and glucose were high at high hill altitude both in sheep and goats. A negative correlation was found between Famacha and haemoglobin levels in goats which was significant at mid-hills. A negative correlation was also observed in Body condition score and EPG in goats. The incidence of gastrointestinal parasitism and haematobiochemical profile was carried out in two other flocks (flock II and III) at mid hills altitude. In flock II (goat) 80% of the sample was positive for GIT parasitism in goats and the mean EPG was  $1656.67 \pm 136.40$ . In flock III (sheep) 93.33% of samples were positive for GIT parasitism in sheep and the mean EPG was  $1470 \pm 92.08$ . Haematologically, animals of both the flocks showed decreased haemoglobin than normal. Biochemically mean values of calcium, phosphorus, albumin, globulin and magnesium were below the normal in both the flocks. Therapeutic trials were conducted on 90 sheep and 90 goats using closantel, ivermectin and fentas plus in standard doses. The efficacy of ivermectin, closantel and fentas plus was 85.30%, 82.91%, and 73.10% respectively in sheep. In goats efficacy was 81.55%, 85.50% and 70.40% respectively indicating that ivermectin was most effective drug in sheep and closantel was most effective drug in goats against single or mixed parasitic infections.

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