Prevalence and intensity of gastrointestinal nematode infection in small ruminants in three West African countries

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Introduction

Small ruminants ingest gastrointestinal nematodes (GIN) during pasturing (Fig. 1). Digestive parasitosis leads to a decrease in animal productivity and the cost of treatment has an impact on the economy of rural households especially in Africa (Blaowe and *al*., 2019).

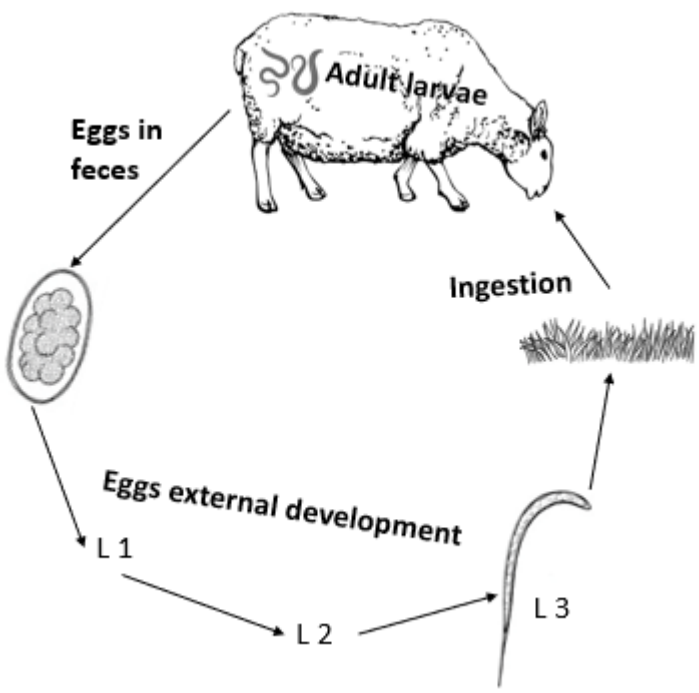

Fig. 1: GIN life cycle (Roeber and *al*., 2013)

Objectives: Determine periods of high GIN infection in sheep and goats during the dry and the rainy season in Ouarkhoh (Senegal, SN), Saria (Burkina Faso, BF) and Koulikoro (Mali, MLI).

Materials and methods

- Sheep/goats, male/female, young/adult
- >300 faecal samples
- Late dry (LDS), peak rainy (PRS), early dry season (EDS)
- Samples transported in a cool box
- Laboratory analyses performed directly or within 48 hours
- Individual faecal egg counts using modified McMaster technique
- Each egg counted = 50 eggs per gram of feces (EpG)

Results and discussion

- Highest GIN prevalence in PRS and EDS (all countries) (Fig. 2) ⇨ Climatic conditions seem to influence GIN development (Maniot, 2021)

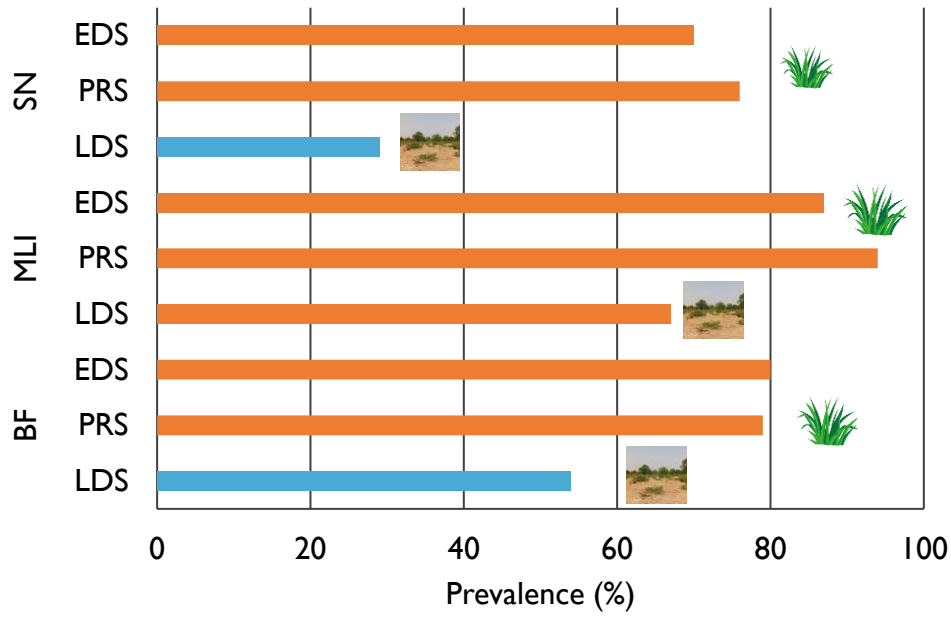

Fig. 2: Seasonal GIN prevalence (%) per country
Blue: low prevalence (<60%), orange: high prevalence (>60%)

- BF and MLI showed higher infection levels ($p < 0.001$) (Fig. 3).
- Highest EpG found in male and young animals during PRS in BF and MLI ($p<0.001$).
- The climatic conditions seem more favorable for the proliferation of parasites in MLI and BF.

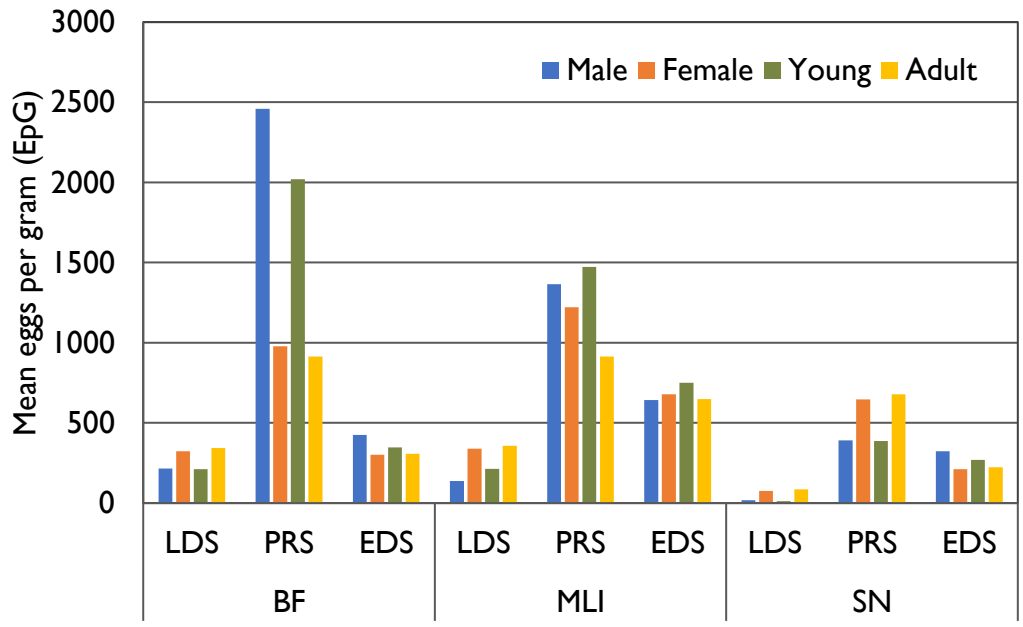

Fig. 3: Intensity of GIN infection of small ruminants in different seasons (LDS, PRS, EDS) in three countries

Highlight

GIN control seems most important in the middle of the rainy season, especially for male and young animals.