Gastrointestinal Parasite Infection in Bore Goats From Thap Than District,Uthai Thani Province

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Abstract

Goat farming is a popular source of income for residents in the Uthai Thani province's suburbs.However, a lot of goats are raised in free-range or semi-free-range conditions, which makes goats more susceptible to parasite infestations. This study was conducted to investigate the prevalence of gastrointestinal parasites in Boer goats through fecal examination from three sites,in Khok Mo and Khao Luk Chang villages, located in Thap Than District, Uthai Thani Province. A total of 90 fecal samples were collected (30 samples per village). The parasitic infections were examined using simple smear and formalin-ether techniques. The results revealed that the prevalence (P) of parasitic infection was 50 %, 40 %, 60% in Khok Mo (site 1), Khao Luk Chang (site 2), and Khao Luk Chang (site 3) respectively. Four parasite species were identified: *Strongyloides* spp. (P=41.11), *Trichostrongylus* spp. (P= 6.67), *Trichuris* spp. (P=23.33) and *Paramphistomum* spp. (P= 3.33).*Strongyloides* spp. was the most predominant species across all three sampling sites in the three villages. The discovery of parasitic in Boer goats is reported for the first time in Uthai Thani Province, which will help farmers monitor and manage parasitic infections.

Introduction

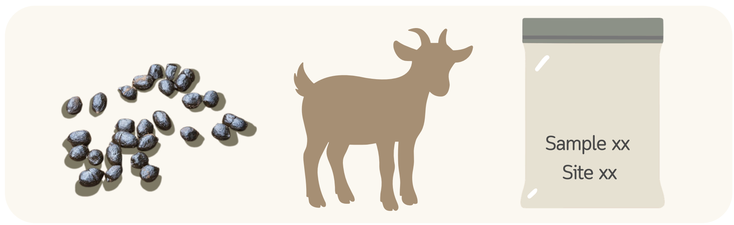
Goat (*Capra hircus*) production plays a significant economic role in Thailand, particularly under traditional and semi-intensive grazing systems. However, gastrointestinal parasites (GIP) represent a major health constraint that adversely affects productivity, leading to diarrhea, weight loss, anemia, immunosuppression, and increased mortality in young animals.The occurrence and intensity of infection are influenced by multiple factors, including production systems, seasonal variation, temperature, humidity, pen management, soil hygiene, and the use of anthelmintic treatments. Despite extensive regional reports, gastrointestinal parasitism remains a persistent and significant challenge to goat health and sustainable production in traditional grazing systems.

Objectives

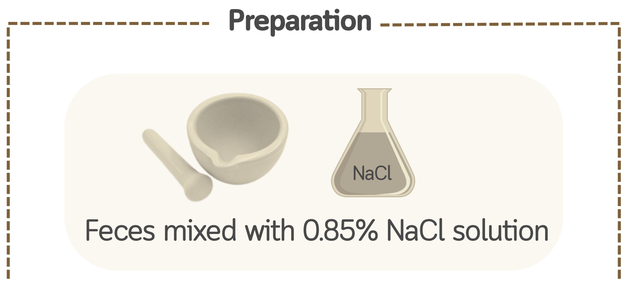
To determine the prevalence and identify the species of gastrointestinal parasites in free-ranging goats raised under traditional smallholder systems in Uthai Thani province.

Methodology

Sample collection : Approximately 1 g of feces was used for laboratory examination.



Parasitological examination



Parasite identification : Parasites were identified based on morphological characteristics under light microscopy.

Results

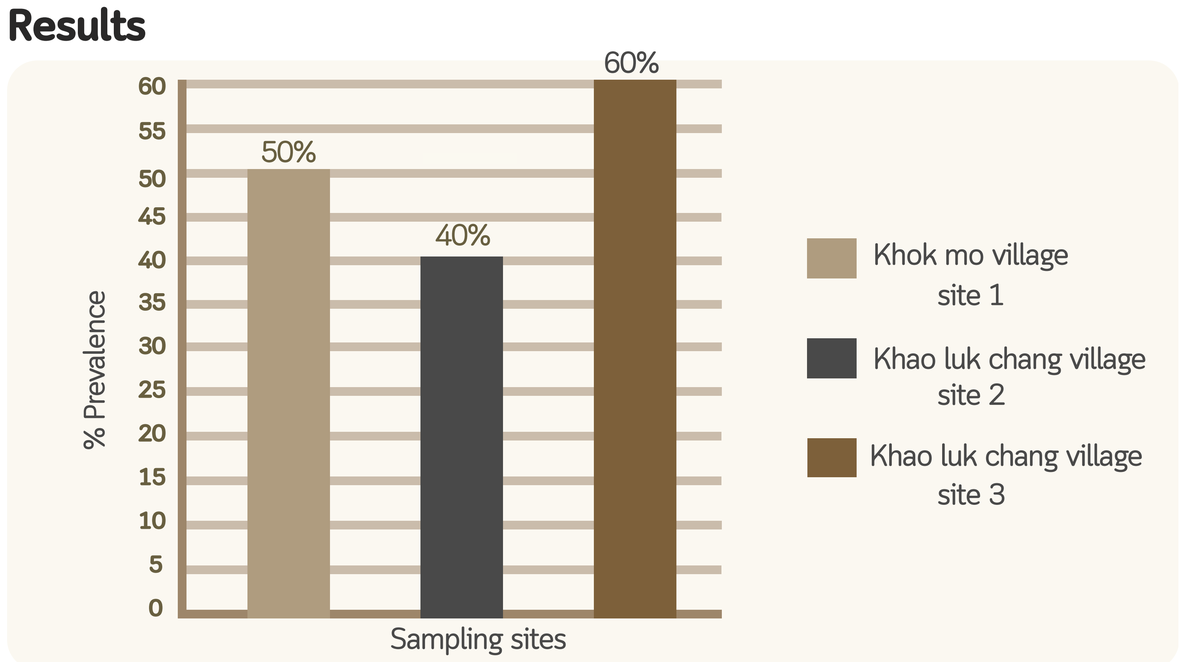


Figure 1 : Prevalence (%) of gastrointestinal parasites in goats from three villages in Uthai Thani Province.

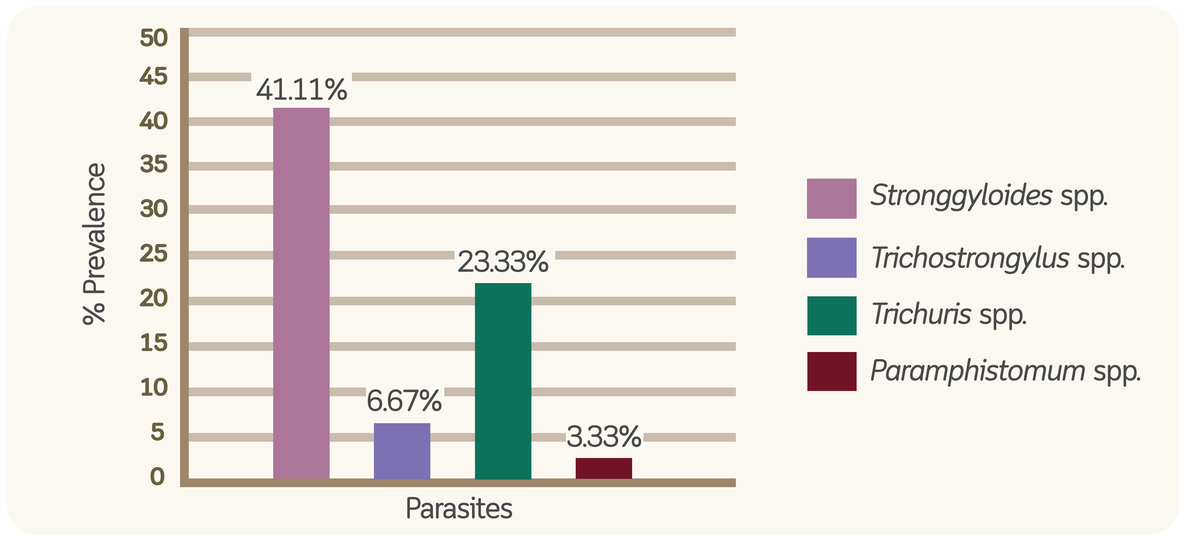


Figure 2 : Prevalence (%) of each parasite species in goats raised under traditional free-ranging systems in Uthai Thani Province.

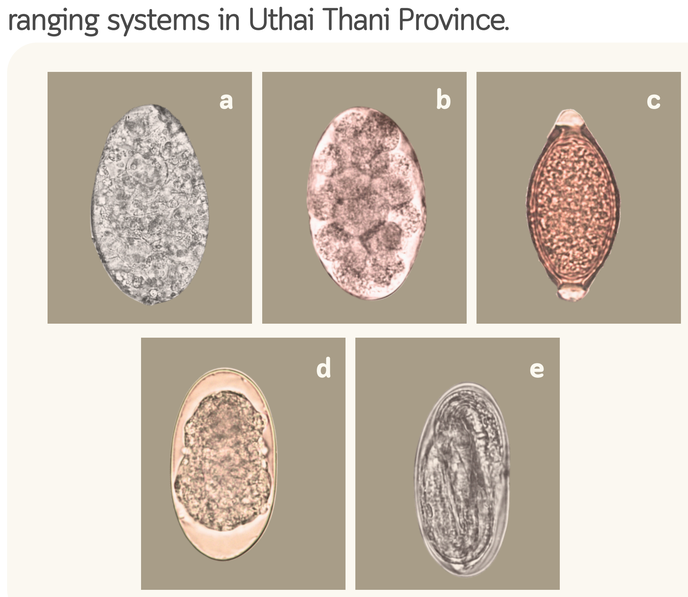


Figure 3 : Morphology of gastrointestinal parasite eggs found in goat fecal samples.
a) *Paramphistomum* spp. egg
b) *Trichostrongylus* spp. egg
c) *Trichuris* spp. egg
d) *Strongyloides* spp. (unembryonated egg)
e) *Strongyloides* spp. (embryonated egg)

Discussion and conclusion

The present study confirms that gastrointestinal parasite (GIP) infections remain highly prevalent in goats raised under traditional smallholder grazing systems in Thailand. The detection of common parasites, including *Strongyloides*, *Trichostrongylus*, *Trichuris* spp.is consistent with previous reports from Phitsanulok (Wuthijaree et al., 2022) and Khon Kaen (Rerkyusuke et al.,2024) Provinces, which documented similarly high prevalence rates. The persistence of infection may be associated with free-ranging management practices, environmental contamination, and favorable climatic conditions that enhance parasite survival and transmission.These findings highlight that gastrointestinal parasitism continues to be a significant constraint to goat health and productivity. Effective control strategies, including improved farm hygiene, regular fecal monitoring, and appropriate anthelmintic management, are essential to reduce infection pressure and support sustainable goat production in traditional tropical systems.

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References

Rerkyusuke S, Lerk-u-suke S, Mektrirat R, Wiratsudakul A, Kanjanapa P, Chaimongkol S, 2024 Prevalence and associated risk factors of gastrointestinal parasite infections among meat goats in Khon Kaen, Thailand. Vet Med Int.

Wuthijaree K, Tatsapong P, Lambertz C, 2022 The prevalence of intestinal parasite infections in goats from smallholder farms in Northern Thailand. Helminthologia.