



Gastrointestinal parasites in sheeps and goats

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Parasites in livestock trigger diseases of major socio-economic importance worldwide and negatively affect growth performance.

Parasitic diseases continue being a major limitation in livestock production systems and gastrointestinal nematodes cause deleterious problems in domesticated livestock.

Parasitic gastroenteritis (PGE) is a condition caused by **large numbers of gastrointestinal nematodes** that reside in the gut (abomasum or intestines) of the ruminant host (sheep, cattle, goats).

Common stomach worms

- ***Haemonchus contortus*** (barber's pole worm)
- ***Teladorsagia circumcincta*** (brown stomach worm)
- ***Trichostrongylus*** (stomach hair worm)



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Three categories of animals susceptible to heavy worm burdens

- Young lambs ([sheep](#)) and kids ([goats](#)) which are still **developing immunity** on the environment they are kept,
- Mature goats and sheep which are **immuno-compromised** characterized by ill health,
- Goats and sheep which have been exposed to high infection pressure from **contaminated pastures** (Zajac, 2006).

Concerns related to gastrointestinal parasites in sheeps and goats

- Many countries incur **hefty costs on the purchase of anthelmintics** to suppress infestation of gastrointestinal worms. The annual cost associated with parasitic diseases in sheep and cattle in Australia was estimated at one billion dollars (Sackett et al., 2006).
- Bear in mind that uncontrolled **frequent use of anthelmintics results in resistance** in nematode populations. With the advent of molecular techniques, scientists have embarked on investigating the epidemiology of different species of gastrointestinal nematodes, so as to counter resistance. Epidemiology studies focus on the occurrence, distribution and seasonal pattern of stomach worms.
- Continuous **research and information sharing** to farming communities is crucial.



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Impact of gastrointestinal parasites in sheep and goats

- ***Haemonchus contortus*** are highly pathogenic and mature adults tend to feed by sucking blood from the mucosa of the [abomasum](#). In small ruminants *Haemonchus contortus* is associated with anemia which may lead to death.
- ***Teladorsagia circumcincta*** are not blood suckers, however, larval development occurs in the gastric glands resulting in nodule formation in the abomasum of small ruminants.
- ***Trichostrongylus axei*** are commonly associated with mal-absorption (failure of nutrients from feed to be absorbed).

The presence of these gastrointestinal parasites in sheep and goats entails **significant weight loss** that directly affects targeted market weight of goats and sheep. The deterioration of the animals' health also manifests in **reduction of milk production** in lactating does and ewes, which gives rise to **death of kids and lambs**. Not only meat and milk can be compromised by gastrointestinal parasites, they also provoke **poor quality of wool growth in sheep**.

Non treated disease leads to **intermandibular edema** (bottle jaw) characterized by fluid swelling beneath the jaw.

Therefore, money has to be spent by a farmer on both preventive and curative treatments.



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Control measures and how to intervene

- On randomly selected goats and sheep, faecal samples can be sent to the laboratory to carry out **faecal egg counts**. Hence, farmers are able to know the parasitic load on their herds.
- **Drug rotations** to suppress resistance and taking cognoscente advice from veterinarians.
- Practice **rational grazing** on farms.
- **Isolation** of sick animals.
- Practice good **animal husbandry** on farms to ensure success of enterprises.
- It is vital to **adhere to vaccination programmes** in controlling diseases.

Takeaway for the future

The recent interest in **integrated parasite management (IPM)** programmes, of which breeding for genetic resistance is a component, can enable animals to tolerate pathogens by maintaining low worm burdens irrespective of infection pressures because they have enhanced immune responses which prevents adult worms from developing in their gut.

References



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