PRACTICE ABSTRACT: 3

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SPARC
Sustainable PARasite Control in Grazing Ruminants

Gastrointestinal Nematodes Management Plan for extensive sheep/goat dairy farming systems in semi-arid areas

1. Monitoring Program

Regular testing and health assessments to track gastrointestinal nematode (GIN) levels and health status.

When?:

- **Autumn:** Early lambing/kidding season for older ewes/does.
- **Spring:** Late lambing/kidding season for young ewes/does.

Parameters to Evaluate:

- Faecal Egg Counts (FEC): Quantify parasite load.
- Clinical signs: Monitor for diarrhoea, coughing, and anaemia.

2. Management practices

Farms with high FECs

Adult Sheep/Goats:

- ✓ Targeted treatment with antiparasitic drugs based on FEC results.
- ✓ Introduce supplement feed containing tannins or other bioactive compounds for two months during lambing/kidding .
- ✓ Rotational grazing in areas with bioactive plants and trees to maintain low parasite levels (all year round).

Lambs/kids:

- ✓ Treatment with antiparasitic drugs all animals.
- ✓ Introduce supplement feed with bioactive properties.

Farms with low FECs

Adult Sheep/Goats

- ✓ Introduce supplement feed containing tannins or other bioactive compounds for two months during lambing/kidding .
- ✓ Rotational grazing in areas with bioactive plants and trees to maintain low parasite levels (all year round).

Lambs/Kids

- ✓ Provision of feed with bioactive properties.

3. Effectiveness Monitoring

- Conduct follow-up faecal egg counts and clinical evaluations to measure the success of the parasite control plan.
- Adjust treatments and grazing patterns based on monitoring results and environmental changes.

Farming System Characteristics

Animals graze in pastures all year round, only rarely spend time within barn. Barns are open-air light constructions.

Animal Characteristics

The animals are adapted to hot/dry conditions.

Grazing Environment

Shrubs and trees rich in bioactive secondary metabolites are highly abundant. High availability of bioactive feed material derived from agro-industrial by-products.

Semi-arid climatic conditions

4–6 months without any rainfall, drought, and high temperatures

Key Considerations:

Environmental Adaptation: Utilize the abundance of bioactive plants and agro-industrial by-products in the region.

Minimal Chemical Usage: Combine targeted drug treatments with natural bioactive feeds to reduce chemical dependency and resistance.

Climate Adaptation: Implement rotational grazing that maximizes pasture use while minimizing parasite proliferation during the long dry season.

This approach integrates sustainable practices with targeted interventions to ensure the health and productivity of livestock in semi-arid environments.

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