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# Strategies for Controlling Gastrointestinal Nematode Infections in Sheep

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# Conventional Control Measures

## Parasite

- Anthelmintic treatment
  - narrow vs broadspectrum
  - 3 major broadspectrum classes (levamisole, benzimidazole, macrocyclic lactone)
  - suppressive, strategic, tactical, curative treatments
  - use of sustained release devices
  - anthelmintic resistance - HUGE PROBLEM

## Environment

- Grazing management
  - pasture spelling - limited use
  - use of stubbles and sown pastures and fodder crops
  - use of non-susceptible animals (cattle, dry sheep)

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# Key features of control programs

- **Aim to reduce pasture contamination**
  - pre-lambing drench to reduce peri-parturient rise in egg counts
  - lamb onto clean pastures
  - treat weaners at weaning
  - treat adult sheep when environmental conditions are the most adverse for worm development (e.g. summer drenches in winter rainfall areas), and/or prior to a seasonal increase
  - use immune stock to “clean up” infected pastures
- **Aim to slow development of anthelmintic resistance**
  - keep drench frequency to a minimum
  - rotate the use of major broad spectrum groups
  - use of narrow spectrum drenches where possible
- **Monitor progress by measuring faecal egg counts and drench resistance**

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# Future / Novel Control Measures

- **Host**

- increased use of genetic selection for resistance
- strategic use of improved nutrition
- vaccination (?)

- **Environment**

- biological control using nematophagous fungi

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